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DEPARTMENT OF ANTIQUITIES
IN PALESTINE

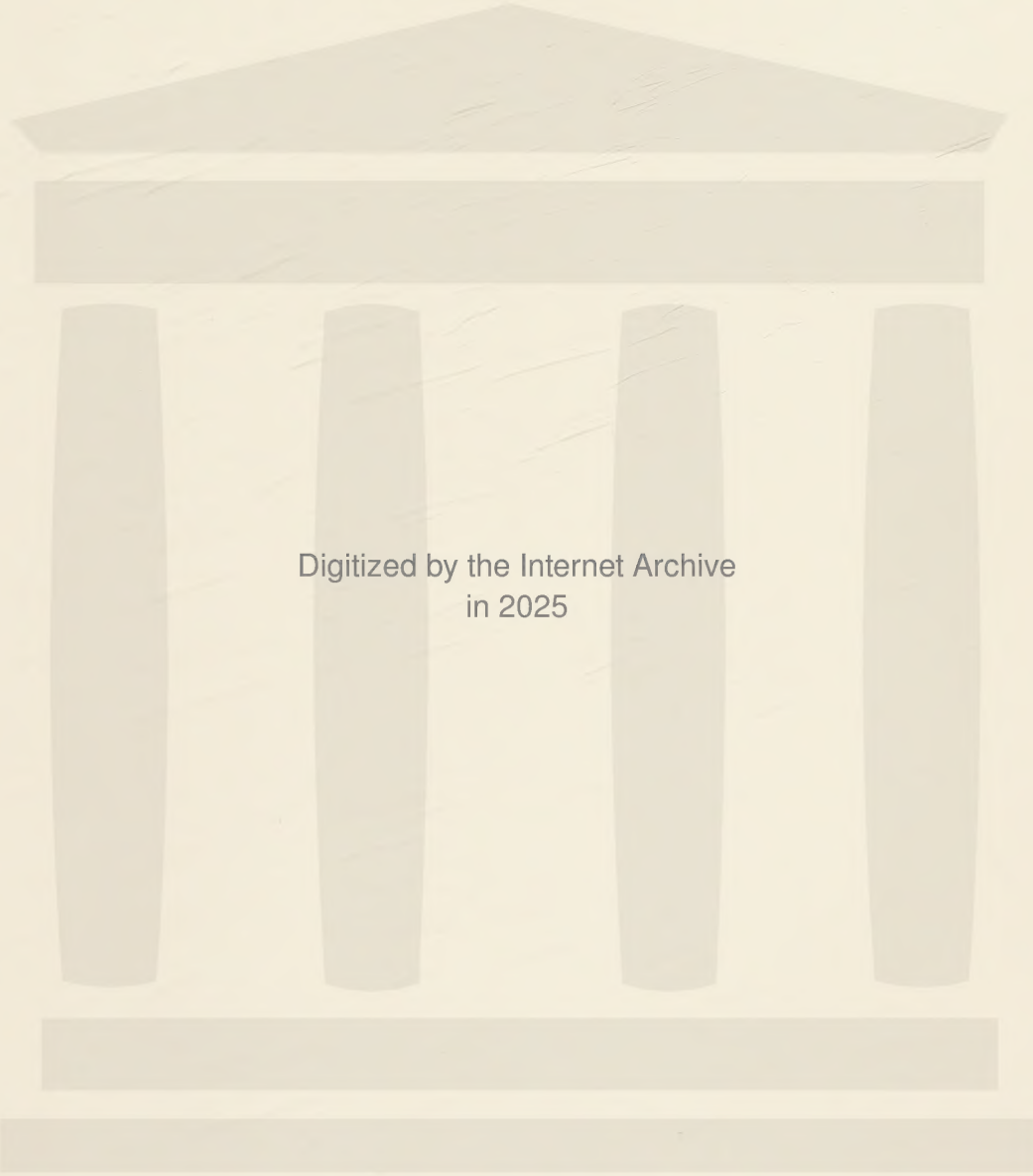
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EXCAVATIONS AT RĀS EL 'AIN II

Painted Pottery

EXCAVATIONS AT RĀS EL 'AIN. II

1. *The Site*

IN connexion with providing filters for purifying the waters conveyed to Jerusalem, a section of the mound at its north end, 41·85 m. by 11·85 m., intended to hold the sedimentation tanks, was excavated in 1936 (Figs. 1 and 2).¹

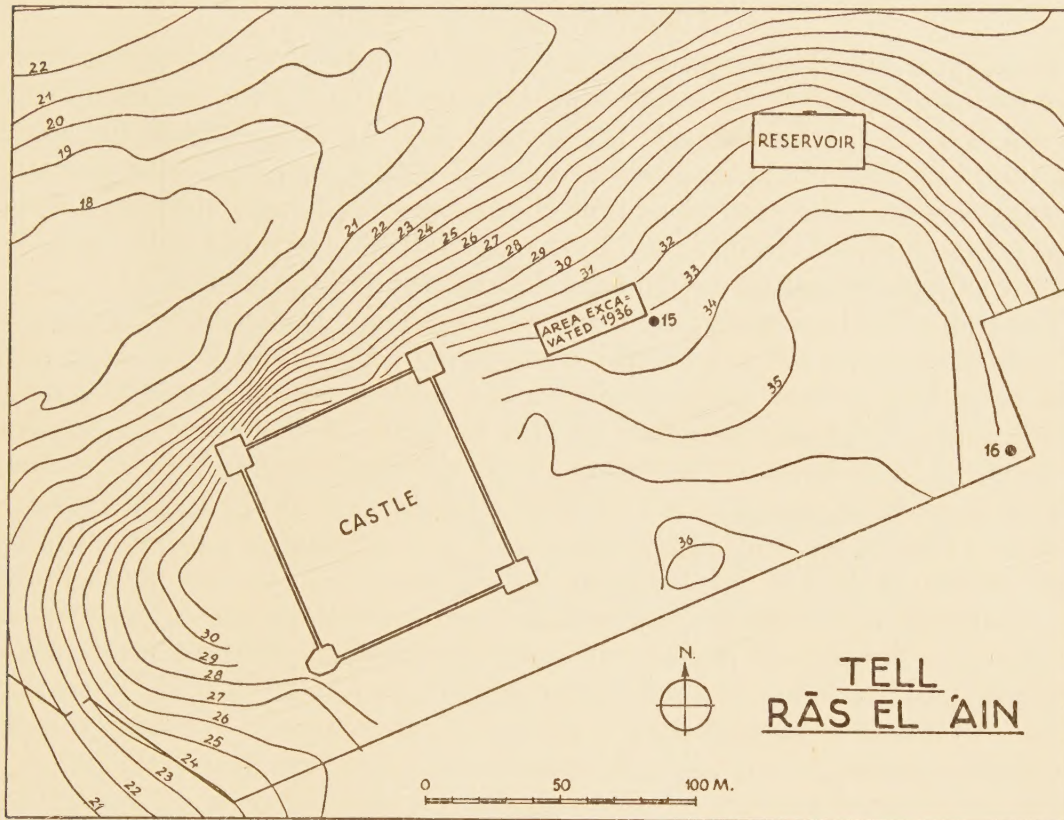


FIG. 1

The area is in the vicinity of the reservoir which contained the city wall excavated in the previous year (Site plan, Fig. 1).² The surface of the ground

¹ The depth of the excavation was not uniform. It approximated to 4–5 metres and is shown on the plan to datum level for the respective sections which are indicated by broken lines. (Cf. Pl. XXVI, 2). A trench holding the drain pipe at the base of the southern wall was excavated to a greater depth.

The plan is divided into centimetre squares, the vertical and horizontal lines marked with numerals and letters respectively. A similar arrangement was effected on the site by marking numerals and letters on a paling set up at 3 m. from the edge of the excavation (Pl. XXVI, 1). The paling, rising 29 cm. above the ground surface at its SW. corner, served as datum level for measuring the depth of objects found in the course of the excavation. All levels in the text are given in cm. below the datum.

² See *QDAP*, Vol. V, pp. 111–26, 'Excavations at Rās el 'Ain', henceforward abbreviated as *RA*.

sloped at an angle of six degrees from south to north, a fall of 1.20 m. over an area *c.* 12 m. wide, with a smaller gradient from east to west.¹

The excavation was subsequently extended to allow room for the erection of concrete walls for the tanks. This extension is not included on the plan.² The later cutting at its SW. point bordered on Pit 15 previously excavated.³

2. *The Stratification of the Site*

Two layers can be distinguished in the debris. The division between them was usefully marked by the rubble foundation at the base of the brickwork seen in Pl. XXVI, 1, left-hand side (cf. section, Fig. 2). The level in the strata indicated by this rubble foundation extended with a slight westward gradient throughout practically the whole area. The relative sequence of the debris above and below this level was indicated by the fact that at its west end the brickwork on the rubble foundation overlaid the east end of Grave 4 (see Fig. 2).

The upper level contained the brick wall above-mentioned, the thickness of which, since it was cut at an angle, is uncertain. The bricks, 8 cm. high and not exceeding 30 cm. in length, were laid with a brown mortar *c.* 9 mm. thick.⁴ The layer was disturbed by late remains. A Byzantine foundation 1.90 m. wide, of hewn slabs 0.55 m. long, was unearthed at 1.50 m. below datum level, with quantities of roof tiles beside it. It could be traced at intervals on a line 19 m. long, beginning at 22E and running in a westerly direction nearly parallel to the edge of the excavation. The east side of the excavation from metre 35 to the end and across its whole width was used as a lime pit. A series of deposits of earth and lime at different levels were observed, with a filling of earth underneath them (see Pl. XXVI, 1, on the left). All intrusive remains seen in the stratification appear to belong to one complex, possibly a lime kiln, of undetermined, perhaps medieval, date.

The lower level appears to have contained a number of open graves, to judge by pottery groups found in connexion with bones. At 28/29 I/H,

¹ It is remarkable that the present slope (S. to N.) does not appear to have existed at the bottom level (compare depths of the graves). This might be explained by supposing that the city wall followed the contour on the north of the site and served as a retaining wall to the ground south of it. It is, however, difficult to ascertain the direction of the wall with any degree of certainty. This can only be determined by further excavation. The subsequent formation of the slope may be attributed to the collapse of the later constructions, erosion, and denudation.

² Objects found in the south extension are marked with a (1) after the indication of provenance; those in the north extension with 'M'.

³ *RA*, p. 112. This pit yielded at 4.20 m. from surface (*c.* 4.70 m. below datum level) a scarab (Pl. XXXII A, 5) dated to the XIIIth dynasty.

⁴ It is hoped to ascertain in the future the nature of the brick wall, when the contemplated extension of the filters to double their present size shall take place.

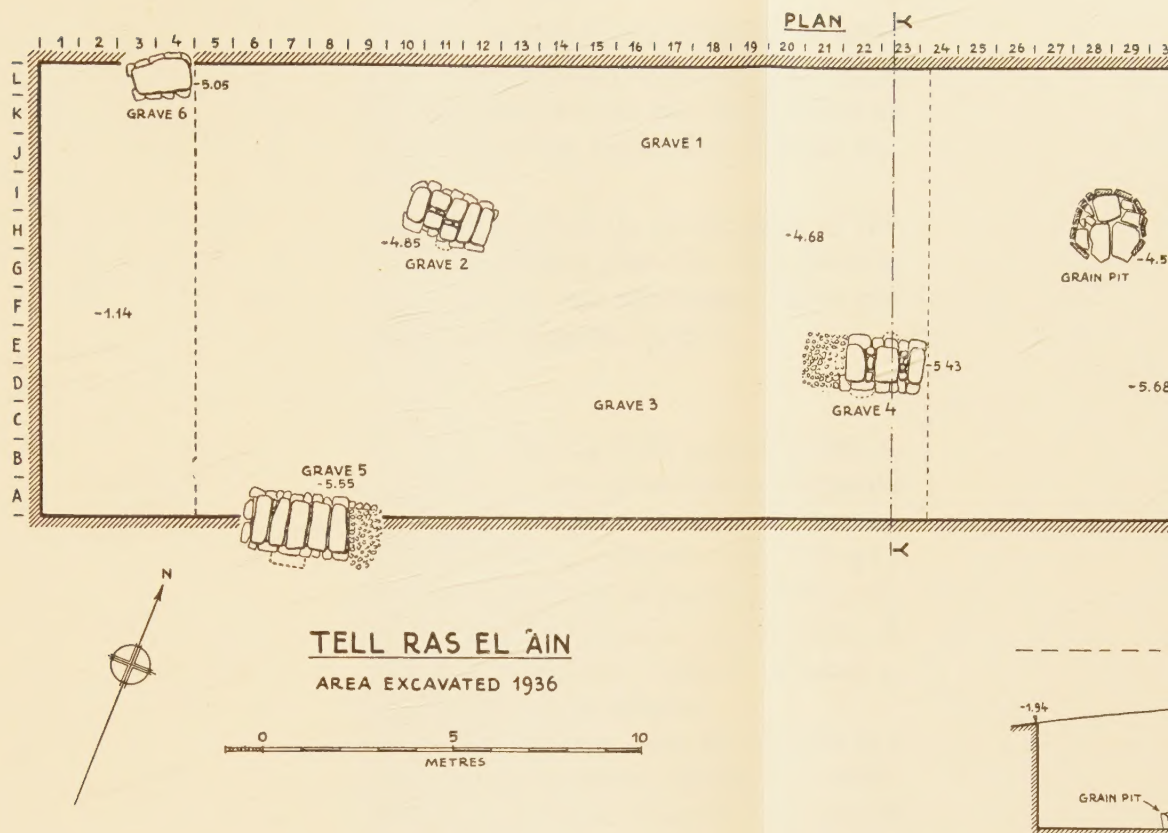


FIG. 2

EXCAVATIONS AT RĀS EL 'AIN. II

4.50 m. below datum level, was unearthed a funnel-shaped basin, possibly a grain pit, roughly circular (diam. *c.* 1.60 m.), constructed of thin slabs (Pl. XXVII, 1). A similar construction was discovered in the excavation of the reservoir in 1935 at III, h/i-6.¹ Sunk below the lowest level of the excavation were discovered the built graves.

From our stratigraphical section as well as from previous excavations of the northern section of the tell of Rās el 'Ain, it is evident that the Late Bronze and Iron Ages are not represented and that the site was abandoned from the *beginning* of the sixteenth century B.C. till the Hellenistic period.

3. *The Built Graves*

Four built graves (Graves 2, 4, 5, 6 on plan, Fig. 2) with contents intact, were discovered at the lowest excavated level. They were lying scattered over the western section of the excavation, the graveyard tending to extend further westwards. None were found east of Grave 4. Grave 1 at 17 J-425 appears to have been an open grave to judge from a group of pottery (Nos. 36, 43, 55,² Pls. XXX, 15, XXXIII, 14, 17), found in connexion with bones. A heap of bones representing more than a single burial was found at Grave 3.

The method of construction of the built graves was as follows:

A rectangular pit was dug into the ground and its long sides lined with dry masonry and covered transversely with irregularly hewn blocks of stone. The small grave No. 6 was an exception, having been covered by a single slab. The interstices left between the roofing slabs were packed with small stones. It was noted that in all cases a gap had been left between the roofing slabs and the ends of the graves, one of the gaps being stopped and covered with rubble piled carefully over one extremity of the grave, the other being roughly closed with one or two stones, as in Grave 5, fig. 2. It is obvious that the short sides of the pit were left without facing, as this occurs even on the well-built grave No. 5 (Pl. XXVIII, 1 and Fig. 5). This arrangement is probably based on certain religious conceptions, but also afforded easier access to the interior. It is assumed, therefore, that the pits were sunk in the ground to a depth corresponding to that of the longitudinal walls, and that the roofing was level with the original surface, so that the graves were not completely buried. Pottery in fragmentary condition similar to the contents of the tomb, was found lying on the roofing slabs of Grave 4. The masonry of the walls was of hewn stone laid dry in three or more courses. Sometimes the stone was dressed, particularly in the recesses in the wall, where these recesses had been designed when the

¹ See *RA*, p. 111 and Pl. LXIII, 3.

² See Inventory below, pp. 107-20.

grave was built (as in Grave 5). The recesses in the walls are a characteristic of the graves; there being one or two recesses in a grave. Such recesses could have easily been made by the simple contrivance of leaving out or removing a stone from the lower courses and digging behind to the extent desired. Grave 6 is an exception, having no recess.¹

All graves have an orientation east and west. The dead were buried head to the east with bent knees.² (Pl. XXVII, 3.) The burials were generally badly preserved and much decayed, but the fragments of the skull were invariably

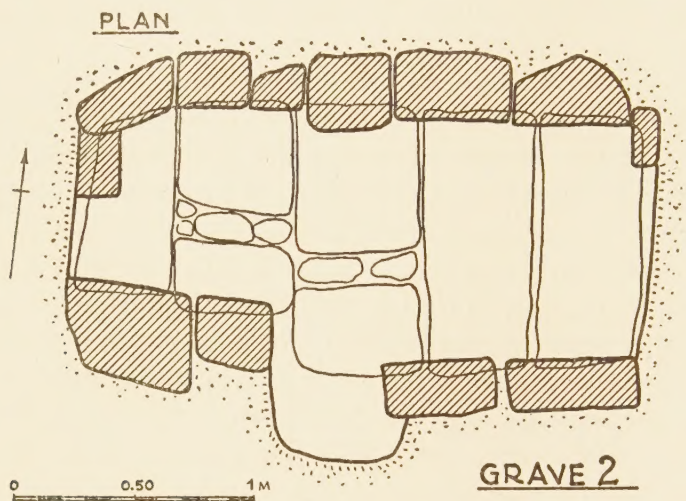


FIG. 3

found near the east end of the grave; if the burial was of an adult, a bronze weapon was found lying beside it on the south.³ Grave 6 contained no weapons, having been designed for a child or youth.

Grave 2 (Fig. 3 and Pl. XXVII, 2, 3) was irregular in plan, measuring roughly 2.30 m. in length, 0.60 m. in height, and 0.95 m. and 0.65 m. respectively at its eastern and western extremities. The walls were built of hewn stones, some dressed, laid in 2-3 courses. There was a single recess in the south wall. The roofing across the middle of the grave (in contrast to the flatly laid slabs at either end), was roughly vaulted or ridged, two stones, one from each side, being inclined towards the centre and locked by rubble between. This may have been designed to increase the height of the interior.

¹ Such recesses served as deposits for bones, a function similar to that of the ossuaries, whose existence is attested from the Early Bronze period onwards (E. L. Sukenik, 'A Chalcolithic Necropolis at Hederah' in *JPOS*, XVII, pp. 15 ff.).

² Cf. Ory, *Palestine Museum Bulletin*, No. 2, p. 9.

³ See Petrie, *Ancient Gaza*, II, p. 2.

EXCAVATIONS AT RĀS EL 'AIN. II

The contents of the grave consisted of a single bronze spear-head (Pl. XXXII B, 5) and pottery (28 vessels in all, numbers 59–87 in catalogue). The pottery crowded the area in the centre and towards the east end, but no stratified layer was discerned. (Cf. Pl. XXVII, 2.)

Grave 4 (Fig. 4, Pl. XXVIII, 2, 3) measured roughly 2·20 m. (E. and W.) by 0·68 m. to 0·75 m. in width, and was 0·55 m. high. It was built in three courses and covered with large irregular stone blocks, one flat slab at the east and larger rubble on the west end. It contained two recesses, one in the

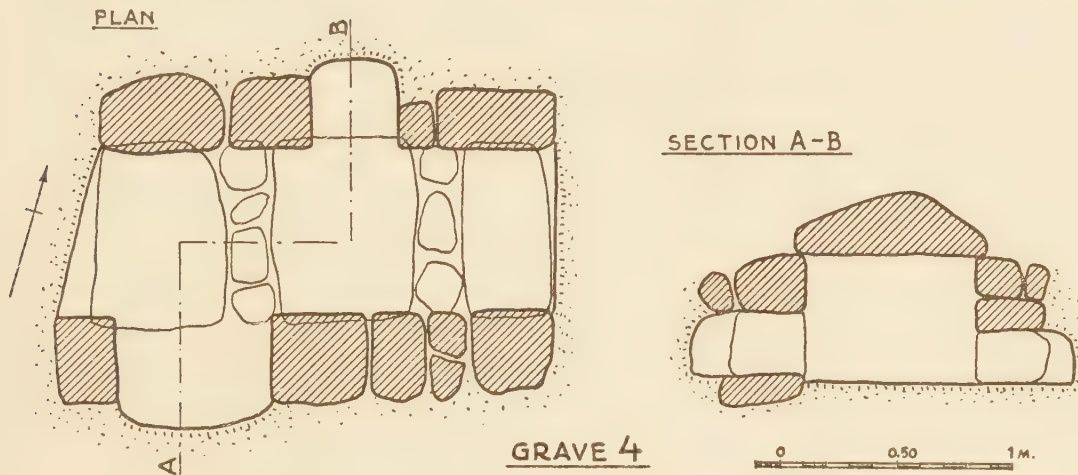


FIG. 4

southern and one in the northern walls. As already mentioned, this grave was overlaid by the brickwork, which fact precludes the possibility of disturbance. The recess in the south wall contained bones, two juglets, and the cup with handle (Nos. 88, 91–2, Pl. XXX, 1, 2, 17). The other recess was packed with bones in a very fragmentary condition filling up the whole opening as if sealed. The grave contained two painted vases (Pl. XXV, 89 and 90), one lying on the loose earth 30 cm. from the east end and close to the north wall, the other by the same wall at the other extremity. Remains of the skull were found on the east side with a spear-head lying beside it (Pl. XXXII B, 7). Fragments of a bronze dagger or spear-head were found further inside the grave (Pl. XXXII B, 2) together with a ledge handle probably fallen into the grave from outside (Pl. XXXIV, 15). Perhaps the scantiness of the funerary remains is to be explained by the discovery of pottery lying on the roofing slabs over the grave.

Grave 5 (Fig. 5, Pl. XXVIII, 1). Regularly built of hewn stones laid in 4–5 courses. It measured 2·60 m. (E. and W.) by 1·10 m. wide, 0·95 m.

high, and contained one recess in the south wall. The roofing was of five large blocks of stone. The contents of the grave consisted of a single bronze

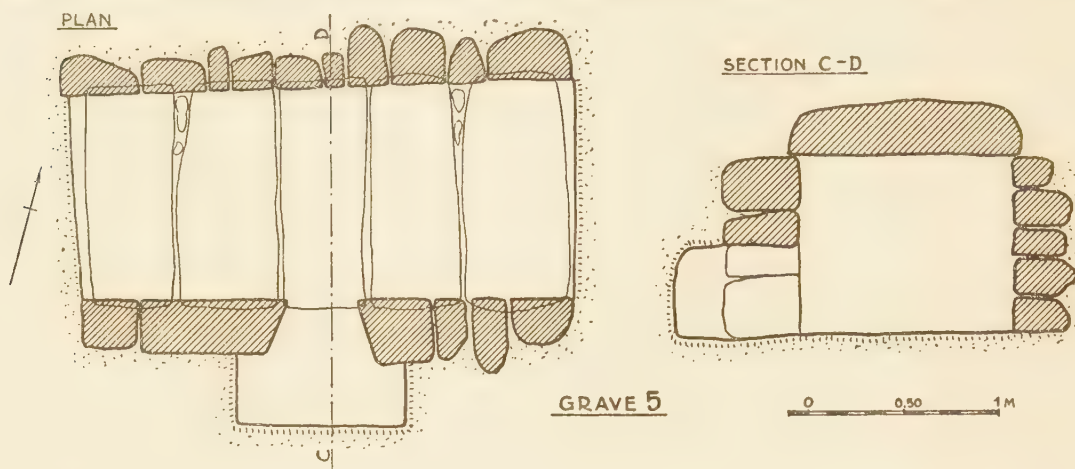


FIG. 5

dagger or spear-head (Pl. XXXII B, 6) and 15 pottery vessels (Nos. 93-108, Pls. XXIX, 7-11, 24-5; XXX, 3, 23-4; XXXI, 1-4, 7, 9).

Grave 6 (Fig. 6). It lies under the partly excavated section at the east end of the excavation and was entered and examined from its south end. This

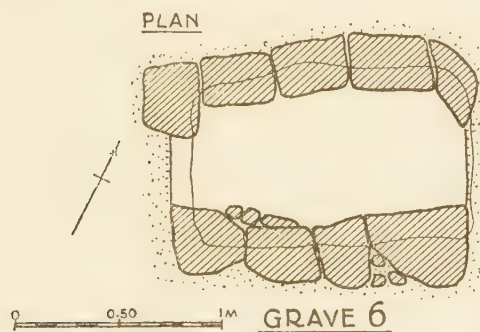


FIG. 6

grave, the smallest of all, was probably designed for a child or youth. It measures *c.* 1.30 m. long by 0.56 m. and 0.47 wide, by 0.65 m. high, and was covered by a single stone slab 12 to 15 cm. thick. It contained the single jug (No. 109, Pl. XXX, 4).

The peculiar architecture of the graves with their fixed orientation and specific burial customs, points to their introduction at an early date in the Middle

Bronze Age.¹ The bichrome painted vases from Grave 4 may date as early as 2000 B.C. The bulk of the pottery from the graves, however, on the evidence of reburial and by comparison with similar types from other excavations, is dated tentatively to the eighteenth-seventeenth centuries B.C.²

¹ Petrie, *Ancient Gaza*, II, p. 2 (Copper Age Tombs).

² I have to thank the Rev. Père L. H. Vincent, O.P., Dr. Nelson Glueck, Director, American School of Oriental Research, Prof. C. S. Fisher of that School, and Mr. Lankester Harding, Chief Curator of Antiquities of the Trans-Jordan Government, for their kindness in examining the Rās el 'Ain pottery with me and for their helpful and valuable advice.

EXCAVATIONS AT RĀS EL 'AIN. II

The Pottery. The pottery is catalogued in accordance with the stratigraphic sequence. It ranges between E.B. III, represented by a few pieces only (Nos. 22, 39, 40, 41(B), 50; Pl. XXXIII, 2, 3, 7), and M.B. II, corresponding to the upper layer in the stratification. The bulk of the pottery from the built graves and the lower stratum belongs to the intermediate period.¹

Comparing the series from the various layers, the frequency of the 'button base' in the upper level stands in contrast with its complete absence in the lower. (Cf. Nos. 10, 11, 12, 13, 14, 18.) The squat juglets with convex and flat bases (Nos. 8, 21) are also confined to the upper layer. The goblet, (No. 5, Pl. XXX, 8) should be compared with a similar shape from Tell Beit Mirsim 'E' level.² No. 101, Pl. XXIX, 9 from Grave 5 is an earlier shape.³

The series from the graves and the lower level may be grouped into the following classes.

Jars. The commonest form at Rās el 'Ain appears to be the jar or pot without handles, often found containing one or more dipper juglets. Nos. 43, 44 (Pl. XXXIII, 16, 17) and Nos. 73-6, 103-4 (Pls. XXIX, 23, 26; XXXI, 3, 9; XXXII, A 10, 11) represent complete specimens. No. 44 is decorated with red bands over a white wash on the upper part of the vessel. No. 73 has a potter's mark incised on the shoulder. No. 74 is peculiar in having a hole and pottery plug near the base.

This type of jar is recognized chiefly by the proportions of width to height, but also by the rim, in which a number of types are represented. It is not well known on other Palestinian sites.⁴ Single examples have been recorded from 'Ain Shems⁵ and an unpublished red burnished specimen from Megiddo.⁶ The prototypes of this ware, and very closely resembling it both in form and decoration, are the funerary pots from Tell Billa 4.⁷ From their frequency and developed stereotyped form these jars seem to represent a marketable ware with its centre of production at Rās el 'Ain.

Another common ware is the large amphora of which Nos. 72, 102

¹ For similar pottery found last year in the reservoir site (see plan *RA*, Fig. 1) cf. *RA*, p. 116 where equation with the F-G levels of Tell Beit Mirsim is established.

² Cf. *TBM*, II, Pl. XXIII, 13.

³ Cf. Petrie, *Ancient Gaza*, III, Pl. XXXII, 31 V 8 (XV-XVIth dynasty); also Duncan, *Corpus of Palestinian Pottery*, at end, Byblos, series of the XIIth Dynasty.

⁴ *RA*, p. 118.

⁵ E. Grant, 'Ain Shems. Funerary pot, Pl. XXIX, from burial (T. 17) 1931.

⁶ From Tomb 911A (P.A.M. No. 34.1719). A jar resembling our type is reported by L. Harding as found at Tell ed Duweir on the NW. limestone ridge, Tomb 1513, No. 1825, 1933-4, dated E.B. III.

⁷ Speiser, 'The pottery of Tell Billa' (*The Museum Journal*, XXIII, No. 3), stratum 4, Pl. LIX, Nos. 1 and 4.

(Pl. XXXI, 6, 7) from Graves 2 and 5 are complete examples.¹ (Cf. *RA*, No. 75 from the reservoir.)

Juglets and Dipper Flasks. The juglets display a variety of types. The dipper flask was originally shaped to resemble the forms of jars with which it was used, i.e., the piriform juglet with pointed base for amphoras, and the bulgy juglets Nos. 56, 85, 91, 92 (Pls. XXIX, 2; XXX, 1, 2, and 10), distinguished by their proportions and roundish or small flattish base, for the jars. Both types have pinched lips. The piriform type often has the base flattened. This appears to have been the style in vogue at Rās el 'Ain, but is also found in connexion with burials on other sites in the Shephela.² The second type of dipper is of interest as being exclusively found in the lowest level, Nos. 91 and 92 coming from Grave 4 together with the handled cup³ (No. 88, Pl. XXX, 17) and the bichrome painted jugs (Pl. XXV). Nos. 80-4 (Pl. XXIX, 4; XXX, 5, 6) differ from the dipper flasks by their flat circular rims and handles attached horizontally to the rim. They are decorated with groups of red bands on a light-brown surface. No. 86 (Pl. XXX, 11) is of elegant form with a tall cylindrical neck.

Jugs. The painted examples come from the graves. No. 105 (Pl. XXXI, 4) of ovoid form and small flattish base (cf. *RA*, No. 25) and No. 106 (Pl. XXX, 3) from Grave 5, No. 77 (Pl. XXV) of globular body and circular flaring rim, decorated with geometrical pattern, from Grave 2. The bichrome painted vases from Grave 4 have been already mentioned. Nos. 79 and 109 (Pl. XXIX, 3; XXX, 4) from Graves 2 and 6 represent the type with flat pinched rims.

Bowls. The carinated bowls, Nos. 27, 66, 99 (Pl. XXIX, 11, 16; XXX, 14) closely resemble those from the reservoir (*RA*, Nos. 1, 2, 3, 64, 65) and compare with the carinated bowls of the F-G layers of Tell Beit Mirsim. No. 27 (Pl. XXX, 14) with small disc base and grooved rim is continuously burnished over a finely combed surface. No. 98 (Pl. XXIX, 8) is a deep bowl, of early shape. Of unique shape is the cup with convex base and trefoil-pinched lip (No. 71, Pl. XXIX, 1); with the pottery of other types found in the lower level are fragmentary vases with flat bases and ledge handles and fragmentary cooking-pots shown on Pl. XXXIV. No. 21 (B) (Pl. XXXIV, 5) has a grooved surface, but is unlike Kh. Kerak ware.

¹ E. Grant, *Beth Shemesh*, No. 374, p. 113; and Jericho, Garstang, *Liverpool Annals*, XXXII, Nos. 3, 4, Pl. XXXIV, 47.

² *Palestine Museum Bulletin*, No. 2, Nebi Rubin and Ramat Gan.

³ Cf. Duncan, *Corpus of Palestinian Pottery*, (at end) Byblos series No. 26 (XIIth dynasty); Montet, *Byblos et l'Égypte*, p. 246, Fig. 109 (925) (Tombeau des Particuliers).

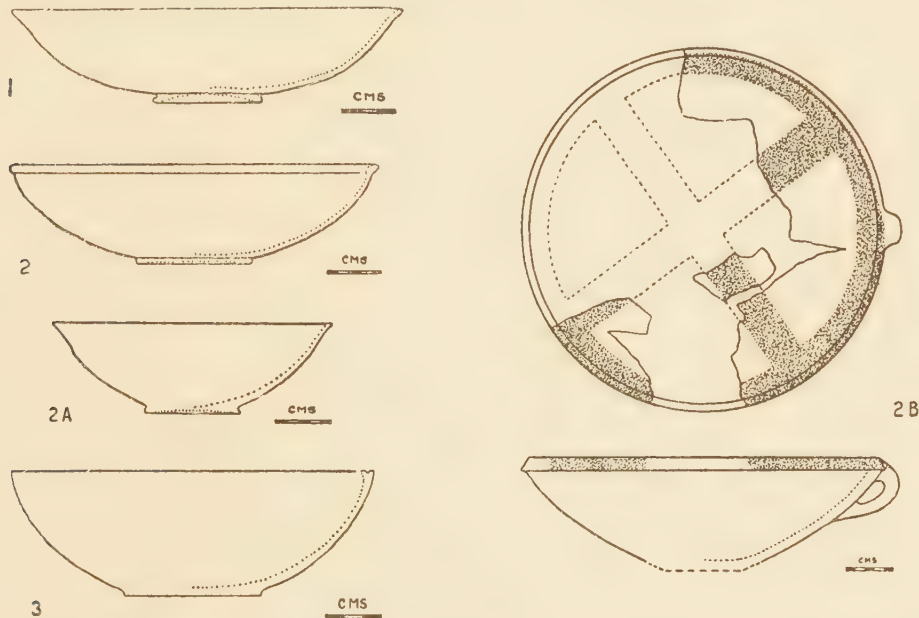
EXCAVATIONS AT RÂS EL 'AIN. II

INVENTORY OF FINDS

A. Pottery

Stratum I. (Above rubble foundation) Nos. 1-21(A).

1. Bowl. [2A-185.]¹ Diam. 20.4 cm. Concave disc-base. Reddish-buff ware. Restored. (Pl. XXXIII, 25.)
2. Bowl. [4J-300.] Diam. 32.5 cm. Concave disc-base. Reddish-brown ware, grey core.
- 2(A). Bowl. [4J-300.] Diam. 24 cm., as above. (Pl. XXXIII, 24.)

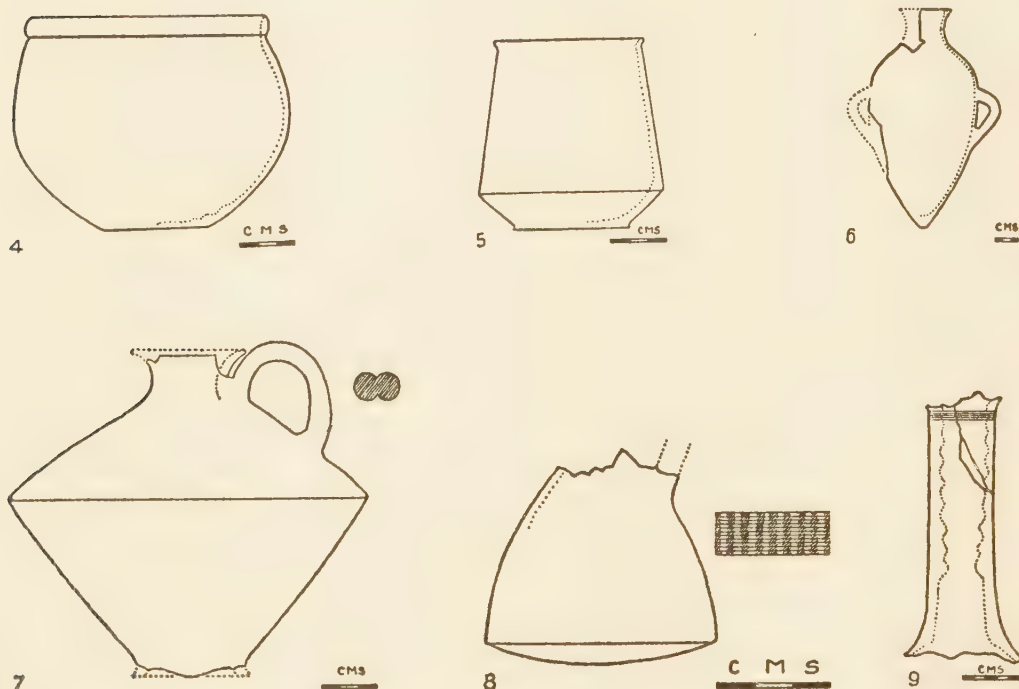


- 2(B). Bowl. [10K-325.] Estimated diam. 35.6 cm. Restored. Possibly two handles. Reddish-brown ware. Interior decorated with crossing bands of dark-red paint, burnished; there is a similar band on the rim. (Pl. XXXII A, 9.) (See H. Frankfort, *Studies in Early Pottery of the Near East*, II, p. 168 f., where the connexions of this type with the 'button-base' and 'divided-handle' wares are discussed; see also H. Schmidt, *Schliemanns Sammlung*, pp. 82-3. Cf. also Grant, *Beth-Shelesh*, p. 149, Nos. 181, 136, and p. 145, No. 3; *Gezer*, Pl. LXI, Nos. 16, 61a; *TBM* II, (G-F), Pl. V, 5.)
3. Bowl. [9L-337.] Diam. 1.95 cm. Disc-base. Plain grooved rim. Reddish-brown ware, well levigated but soft-baked. Exterior and base red burnished. (Pl. XXXIII, 21.)

¹ The first number and letter indicate the square on the plan, Fig. 2; the second number the depth in centimetres below datum.

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4. Bowl. [9E-320.] Diam. 10.7 cm. Flat base. Collared rim. Reddish-brown ware, combed surface. (Pl. XXXIII, 22.)
5. Goblet. [5L-300.] Hgt. 10.4 cm. Carinated. Reddish-brown ware. Hand-burnished over exterior and base. (Pl. XXX, 8.)
6. Jar. [8L-200.] Hgt. 28 cm. Amphora. Small flattish base. Grooved rim. Reddish-brown ware. Lower part wheel-marked to base of handles. (Pl. XXXI, 8.)

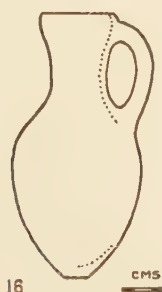
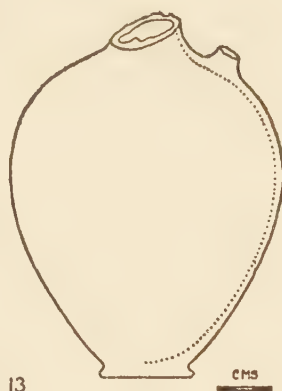
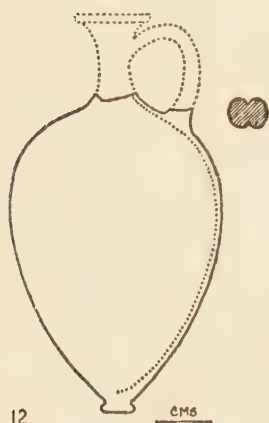


7. Vase. [9M¹-260.] Hgt. 18 cm. Sharply carinated. Ring base with convex bottom. Prominent double handle on shoulder. Reddish-brown ware. Base broken. (Pl. XXXIII, 15.)
8. Juglet. [19E-305.] Hgt. c. 6 cm. Squat convex base. Neck and handle missing. Brownish-buff ware. Red slip. Burnished over body and base. (Pl. XXXIII, 1.)
9. Foot of vase (?). [5G-320.] Original shape uncertain. Reddish-brown ware, gritty-grey in section. (Pl. XXXII A, 1.)
10. Juglet. [2A-185.] Fragmentary, Tell Yehudiyye Ware. Piriform, button base, double handle, punctured decoration shown on Pl. XXXIV, 11, 12.
11. Juglet. [17J-310.] Fragmentary, piriform, button base, drab ware.

¹ Cf. p. 109, note 2.

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12. Juglet. [9M-260.] Hgt. 16.2 cm. Piriform, button base, light brown ware, traces of red slip, combed from shoulder to base, vertically burnished. (Pl. XXXIII, 10.)
13. Juglet. [9M-260.] Hgt. 19.2 cm. Small disc base, double handle, neck missing, buff well levigated clay, continuously burnished to a bright red tinge (incl. base.) (Pl. XXXIII, 4.)



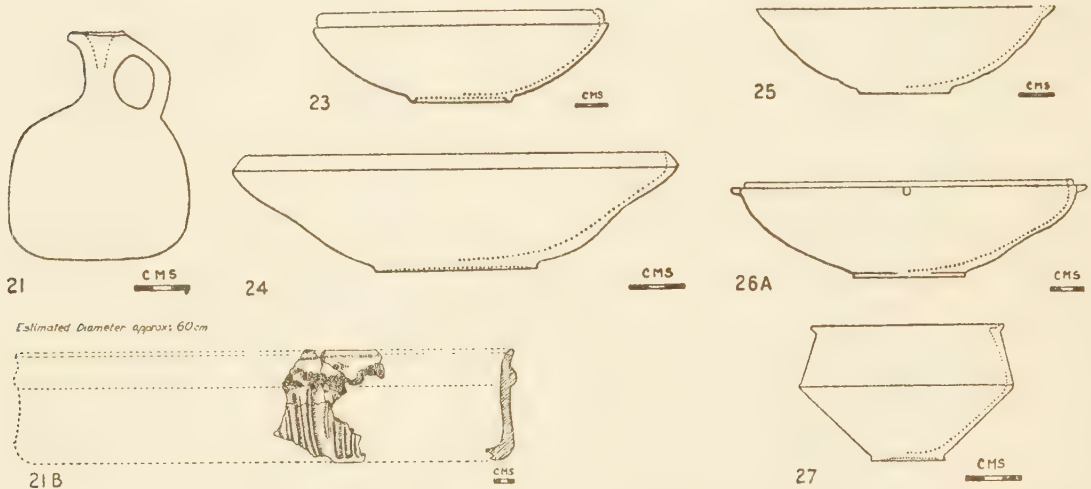
14. Juglet. [6M-268.] Hgt. 7 cm. Piriform, button base, neck and handle missing, brownish-buff ware, vertically burnished.
15. Juglet. [5L-300.] Hgt. 24.2 cm. Piriform, pointed base, pinched spout, reddish-brown ware with grit, red burnished. (Pl. XXXIII, 11.)
16. Juglet. [5L-300.] Hgt. 13.2 cm. Small flattish base, reddish-brown ware, red burnished. (Pl. XXXIII, 14.) (Rim partly restored in drawing.)
17. Juglet. [34F-315.] Hgt. 17.6 cm. Fragmentary small flattish base, slightly pinched lip, reddish-brown ware, red burnished.
18. Juglet. [25J-330.] Hgt. 18 cm. Piriform. Double handle. Button-base (missing). Well levigated buff clay. Surface covered with brown slip and polished. (Pl. XXXIII, 12.)
19. Juglet. [9L-337.] Hgt. 9.5 cm. Fragmentary. Piriform. Pointed base. Reddish-brown ware, deep-red slip. Burnished. (Pl. XXX, 12.)
20. Juglet. [9L-337.] Hgt. 17.6 cm. Ovoid. Small flat base. Flat pinched lip. Reddish-brown ware. Red slip. Hand burnished. (Pl. XXXIII, 13.)

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21. Juglet. [Provenance: c. 50 cms. below surface, south-east of filters.] Hgt. 13 cm. Squat base. Brown-buff ware. (Pl. XXXIII, 5.) From near surface.
 21(A). Juglet. [4J-300.] Fragmentary. Shape uncertain. Buff clay. Cylindrical neck, 5.5 cm. high, decorated with dark-red painted bands. Body ovoid or globular, painted with closely drawn red lines c. 2 mm. wide in criss-cross pattern.

Stratum II. (Below rubble foundation) Nos. 21 (B) to 58 (A).

- 21(B). Basin. [14F-360.] Hgt. 14.3 cm. Fragmentary. Hand-made. Red clay mixed with large dark grit. Originally decorated with a row of knobs on a

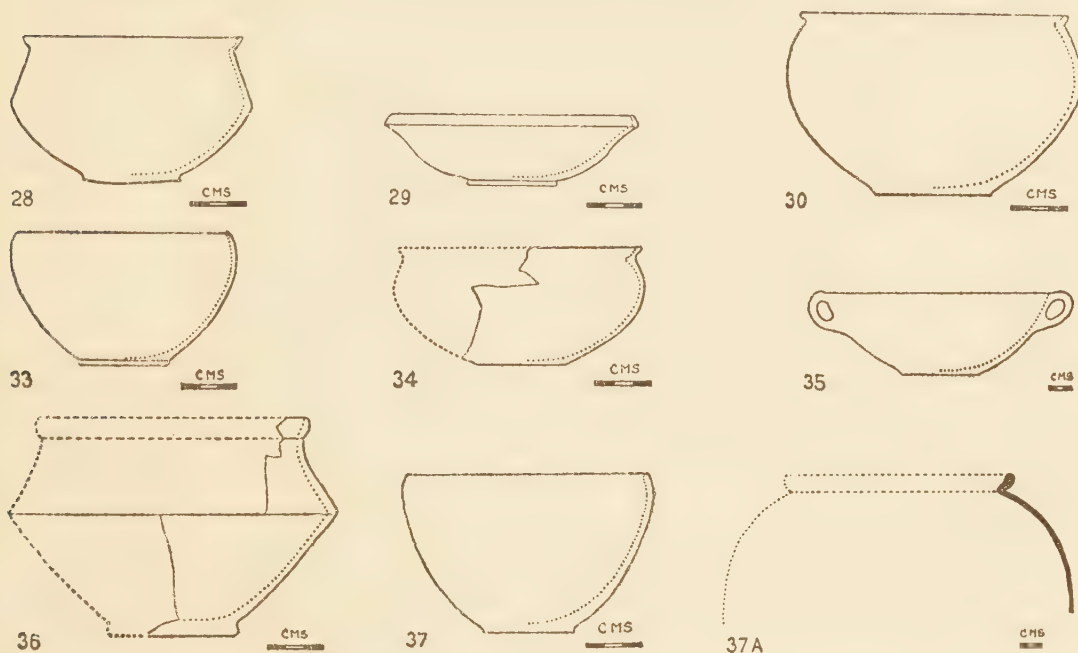


moulded band below the rim and a row of holes, pierced through the wall, in the groove between the band and the rim. The surface has wide irregular grooves. (Pl. XXXIV, 5.)

22. Saucer. [18J-420.] Diam. 7.5 cm. Hand-made. Drab ware. Smoked rim.
 23. Bowl. [5E/F-350.] Diam. 25 cm. Ring base. Profiled rim. Brownish-yellow ware. (Pl. XXXIII, 26.)
 24. Bowl. [33G-360.] Diam. 22.2 cm. Concave disc-base. Reddish-brown ware. Red slip. Interior ring burnished on the wheel and then hand-burnished, forming criss-cross pattern. (Pl. XXX, 18.)
 25. Bowl. [14J-420.] Diam. 27 cm. Disc-base, grooved rim, reddish-brown ware, rim and interior covered with greenish-grey wash. (Pl. XXX, 19.)
 26. Bowl. [33E-380.] Diam. 19 cm. Flat base, reddish-brown ware, interior vertically burnished. (Pl. XXX, 20.)
 26(A). Bowl. [19F/G-355.] Diam. 26.6 cm. Disc-base. Profiled rim decorated with four knobs. Reddish-brown ware. Rim and interior covered with red slip. (Pl. XXX, 21.)
 27. Bowl. [34D-503.] Diam. 9.7 cm. Carinated, small disc-base, grooved rim, reddish-brown ware, surface finely combed and burnished continuously to a bright red tinge over exterior, rim and base. (Pl. XXX, 14.)

EXCAVATIONS AT RĀS EL 'AIN. II

28. Bowl. [5E/F-350.] Diam. 11 cm. Carinated, base and rim as above, reddish-brown ware mixed with grit showing on surface, originally burnished. (Pl. XXX, 16.)
29. Bowl. [5E/F-350.] Diam. 12.1 cm. Disc-base, reddish-brown ware. (Pl. XXX, 13.)
30. Bowl. [14F-360.] Diam. 14.5 cm. Hgt. 9.8 cm. Flat base, reddish-brown ware, rim as in No. 27, but not grooved, combed surface. Edge of base decorated with short obliquely incised strokes.

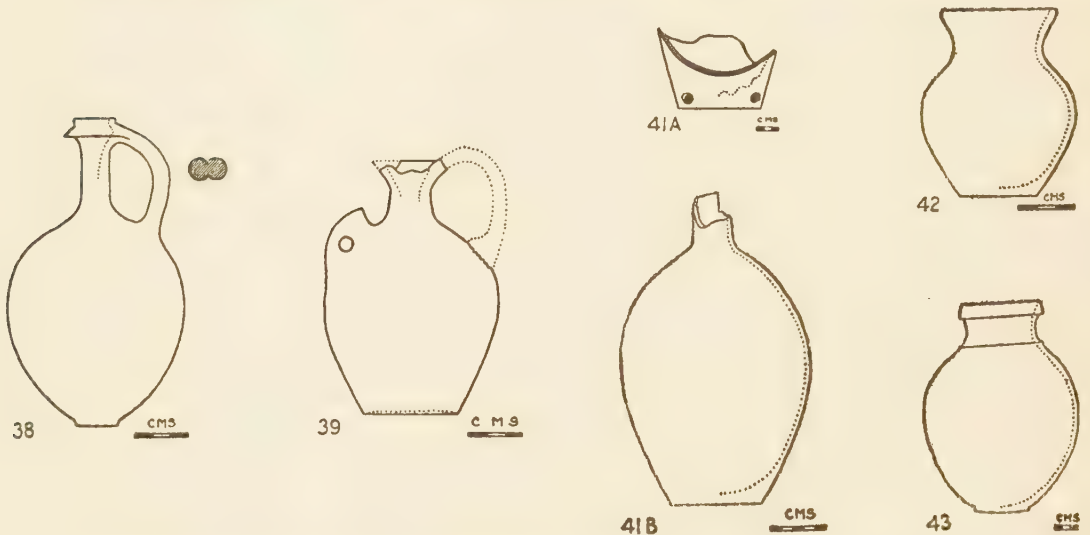


31. Bowl. [18/19F-360.] Diam. 13.1 cm. Flat base, reddish-brown clay, lower half hand-made. (Pl. XXXIII, 20.)
32. Bowl. [19F/G-355.] Diam. 11.8 cm. Disc-base, reddish-brown clay with white grit, burnished red over finely combed surface and over base. (Cf. for shape No. 33, Pl. XXXIII, 19.)
33. Bowl. [5I-360.] Diam. 10.5 cm. Resembles No. 32. (Pl. XXXIII, 19.)
34. Bowl. [5E/F-350.] Fragmentary, similar to No. 28.
35. Bowl. [31E-505.] Diam. 30.2 cm. Flat base, two handles, brown ware, interior and rim covered with red slip and burnished. (Pl. XXX, 22.)
36. Bowl. [17J-425.] Fragmentary. Carinated, disc-base, brown clay covered with red slip and burnished over exterior (upper part on wheel, lower part vertically) and base. (Pl. XXX, 15.)
37. Bowl. [14J-470.] Diam. 12.2 cm. Deep, flat base, reddish-brown ware, red burnished over exterior, rim and base. (Pl. XXXIII, 23.)
- 37(A). Bowl. [8/9I-365.] Fragment of rim, reddish-brown ware, greyish in

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section, wheel-combed surface covered with white wash. Estimated diam. 30 cm. (Pl. XXXIV, 2.)

38. Collar-neck jug. [9D. 4th metre from datum.] Hgt. 16 cm. Small disc-base, double handle, stamped mark on base, , reddish-brown ware covered with dark-red slip, surface combed and continuously burnished throughout. (Pl. XXX, 9.)
39. Jug. [39A/1-520.] Diam. 13.3 cm. Flat base, lug and loop handle (missing), hole pierced through wall at 23 mm. from base, perhaps accidentally. Buff

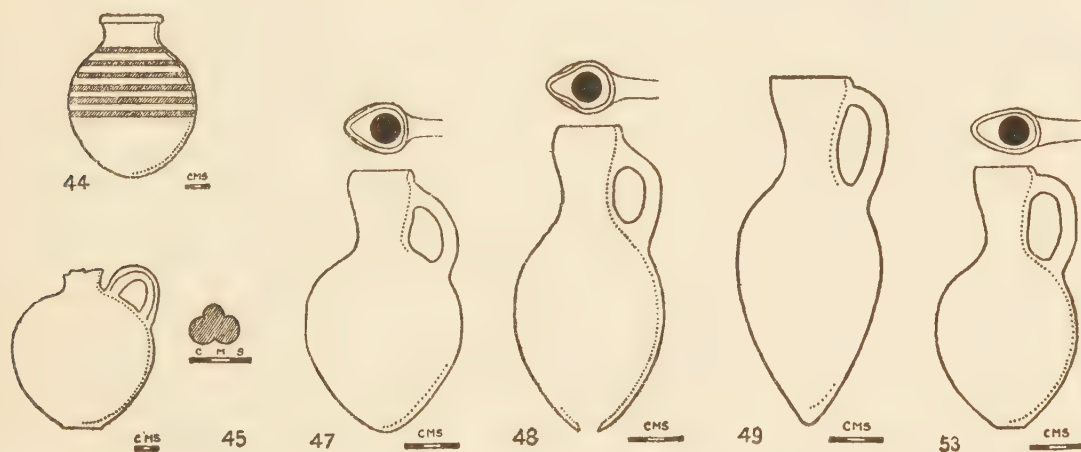


ware, well levigated, covered with bright red slip. (Pl. XXXIII, 2.) (E.B. III, cf. Marquet, 'La deuxième campagne de fouilles a Ay', *Syria*, XVI, pp. 325-52.)

40. Juglet. [18M-420.] Hand-made tiny vase with lug handles, perhaps originally a twin vessel, hole pierced through wall at 17 mm. from base, buff ware covered with red slip. (Pl. XXXIII, 7.)
41. Jug. [32C-530.] Fragmentary, flat base, pierced lug handles at neck, yellowish-buff ware, grey core.
- 41(A). [15E-350.] Flat base. Flaring walls. A series of holes, not pierced through, 5 mm. from the edge of the base as ornament. Reddish-brown ware containing lime grit, grey in section. (Pl. XXX, 7.)
- 41(B). [7E-400.] Hgt. c. 28-30 cm. Restored. E.B. shape. Flat base, cylindrical neck, rim missing. Buff ware, grey core, continuously burnished over surface and base. (Cf. *Gezer*, III, Pl. CXLII, 12.)
42. Jar. [18A/B-435.] Hgt. 9.6 cm. Flat base, coarsely built on the wheel, reddish-brown ware. (Pl. XXXIII, 6.)
43. Jar. [17J-425.] Hgt. 27 cm. Disc-base, no handle, reddish-brown ware, from grave 1. (Pl. XXXIII, 17.)

EXCAVATIONS AT RĀS EL 'AIN. II

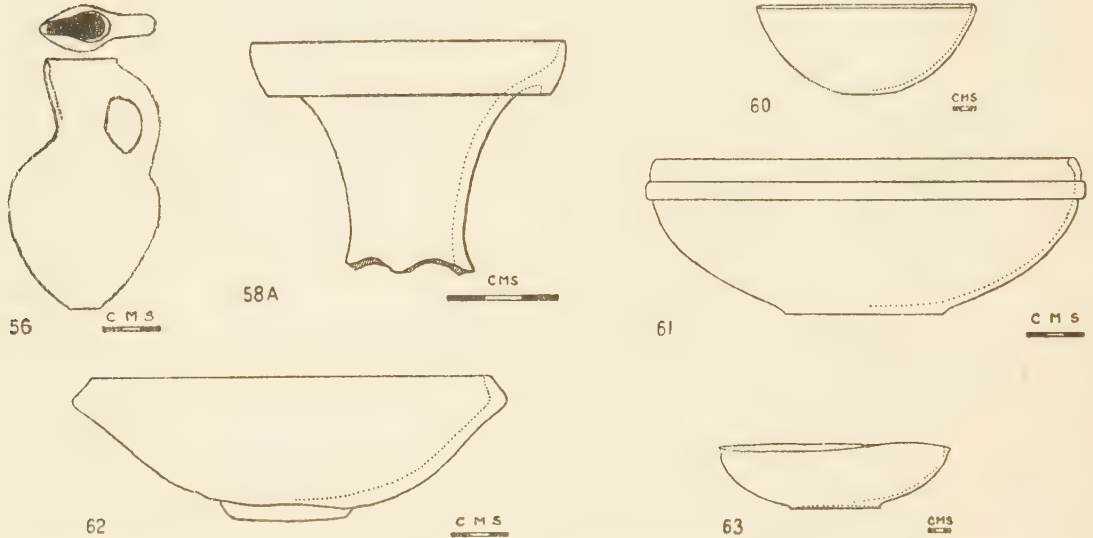
44. Jar. [4D-430.] Hgt. 20.6 cm. Brownish-yellow ware. Surface covered with white wash and decorated over neck and upper half of body with pink-painted zones. (Pl. XXXIII, 16.)
45. Jug. [19F/G-355.] Hgt. 24 cm. Disc-base, triple handle on shoulder, reddish-brown ware, combed surface, red slip, body and base continuously burnished a bright red tinge. (Pl. XXXIII, 18.)
- 45(A) Juglet. [5K-390.] Fragmentary. Resembling in all respects No. 82.
46. Juglet. [20A-390.] Fragmentary, piriform, grey core, drab ware and surface.



47. Juglet. [18B-435.] Hgt. 14 cm. Small flattish, nearly round base, reddish-brown ware, lower part combed. (Cf. No. 56.)
48. Juglet. [12B-385.] Hgt. 16.5 cm. Small flattish base pierced through, perhaps accidentally, reddish-brown ware.
49. Juglet. [34D-503.] Hgt. 18.3 cm. Piriform, pointed base, reddish-brown ware, red burnished (vertically). (Pl. XXXIII, 8.)
50. Juglet. [39A(1)-480.] Hgt. 14 cm. Flattish base, early shape, neck and handle missing, reddish ware, brown in section. (Pl. XXXIII, 3.)
51. Juglet. [6B-480.] Hgt. 10.3 cm. Small flattish base, reddish-brown ware containing grit showing on surface, wheel marks at base. (Cf. 56.)
52. Juglet. [14F-375.] Hgt. 18.1 cm. Small flat base. Flat, pinched rim, handmade, reddish-brown gritty ware, grey core. (Rim restored in Pl. XXXIII, 9.)
53. Juglet. [31E-505.] Hgt. 13.2 cm. Small flattish base, reddish-brown clay, red burnished.
54. Juglet. [34F-525.] Hgt. 12.8 cm. Small flattish base, reddish-brown ware. (Cf. for shape, Pl. XXX, 2, 10.)
55. Juglet. [17J-425.] Hgt. 15.5 cm. Small flattish base, reddish-brown ware, burnished vertically light brown over combed surface. (Cf. for shape Pl. XXXIII, 14.)

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56. Juglet. [17J-440.] Hgt. 13 cm. Small flattish base, reddish-brown clay, containing grit, combed surface. (Pl. XXX, 10.)
 57. Juglet. [5K-390.] Hgt. c. 15 cm. Fragmentary, yellow core, reddish-brown clay. (Cf. for shape Pl. XXXI, 1.)
 58. Juglet. Found on roofing slabs of Grave 4. Fragmentary, small flattish base, reddish-brown ware, combed surface. (Cf. for shape Pl. XXX, 2, 10.)



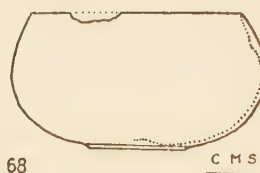
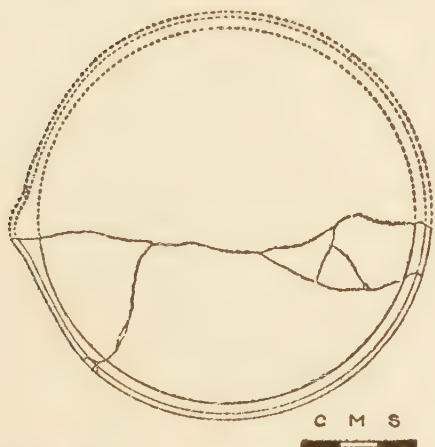
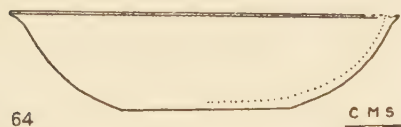
- 58(A). [13B-350.] Spout or neck of vase, folded rim, 8.2 cm. diam., reddish-brown ware mixed with lime grit, rim burnished. (Pl. XXXII A, 3.)

Grave 2.

59. Bowl. Diam. 21.7 cm. Flat base, reddish-brown ware mixed with lime grit, red slip, burnished over interior, exterior and base. (Pl. XXIX, 22.)
 60. Bowl. Diam. 28.7 cm. Flattish convex base, drab core, reddish-brown ware mixed with lime grits showing on surface. Remains of white wash on interior. Chipped rim border. (Pl. XXIX, 18.)
 61. Bowl. Diam. 21.8 cm. Flat base, plastic band 6 to 8 cm. wide below rim, reddish-brown ware, interior covered with light-brown slip and burnished vertically from groove, corresponding to base of plastic band, to cavity of base. (Pl. XXIX, 19.)
 62. Bowl. Diam. 21 cm. Coarse disc-base, profiled rim, reddish-brown ware with grit, wheel grooves marked on inside, originally covered with greyish wash. (Pl. XXIX, 20.)
 63. Bowl. Diam. 28.3 and 30.4 cm. Oval shape, concave disc-base, reddish-brown ware with grit seen on surface. Interior covered with greyish-brown slip and burnished radially. (Pl. XXIX, 21.)

EXCAVATIONS AT RĀS EL 'AIN. II

64. Bowl. Diam. 20 cm. Flat base, grooved rim, reddish-brown ware, surface wheel-marks. (Pl. XXIX, 17.)
65. Bowl. Diam. 10.7 cm. Fragmentary. Shallow, slightly pinched lip (smoked), probably lamp. Reddish-brown ware hard baked, erect rim, wheel-combed. (Pl. XXIX, 6.)



66. Bowl. Diam. 11.8 cm. Carinated, disc-base, grooved rim, reddish-brown ware, red slip, burnished over rim, exterior and base. Upper bend wheel-burnished, lower part burnished vertically. (Pl. XXIX, 16.)
67. Bowl. Diam. 10 cm. Flat base, upper part made on wheel, drab ware mixed with grit, burnt pinkish, exterior covered with greenish-grey wash. (Pl. XXIX, 14.)
68. Bowl. Diam. 10.7 cm. Disc-base, grey gritty ware covered with dark red wash. (Pl. XXIX, 13.)
69. Bowl. Diam. 11 cm. Disc-base, reddish-brown ware, well levigated, red burnish over exterior and base to inside of rim. Interior covered with white wash. (Pl. XXIX, 12.)

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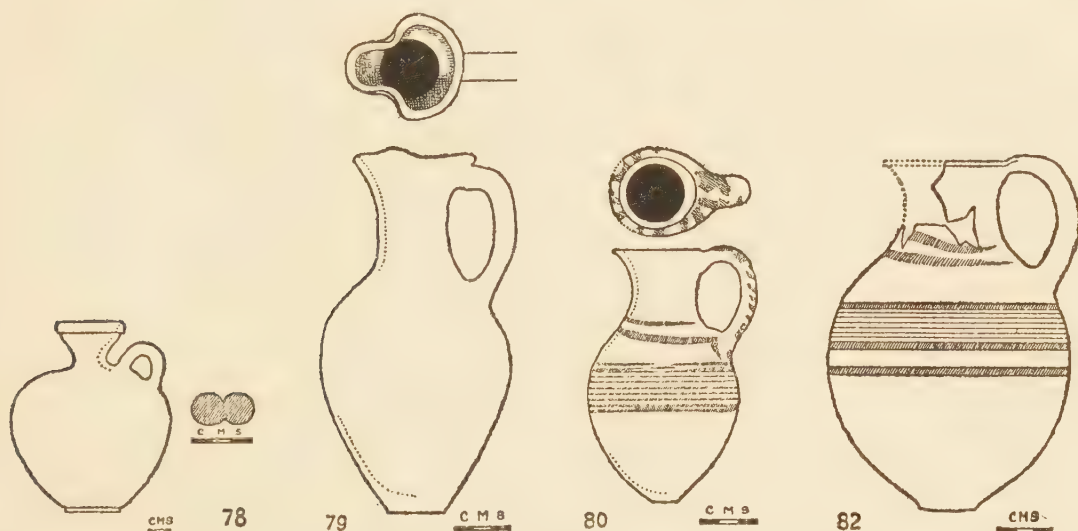
70. Bowl. Diam. 14.3 cm. Carinated, reddish-brown clay with grit, surface wheel marks. (Pl. XXIX, 15.)
71. Cup. Hgt. 8.5 cm. Convex disc-base, trefoil-pinched lip, brownish-buff ware mixed with lime grit showing on surface. Originally burnished (?). (Pl. XXIX, 1.)
72. Jar. Hgt. 50.2 cm. Amphora. Two handles. Slightly convex base, grey core, brown ware with grit, two bands of wheel-grooves on shoulder. (Pl. XXXI, 6.)



73. Jar. Hgt. 33 cm. No handles, slightly convex base, reddish-brown ware mixed with grit showing on surface, originally covered with greenish-grey wash, potter's mark $\int \int$ incised on shoulder. (Pl. XXXII A, 10.)
74. Jar. Hgt. 34.3 cm. No handles, texture as above, surface wheel marked and covered with greenish-grey wash. Plug hole with pottery plug. 26 mm. diam. at 31 mm. from base. (Pl. XXIX, 26.)
75. Jar. Hgt. 38.3 cm. No handles, convex base, texture as in No. 73, remains of greenish-grey wash. (Pl. XXXII A, 11.)
76. Jar. Hgt. 31.7 cm. Restored, no handles, disc-base, ware as in No. 73. (Pl. XXIX, 23.)
77. Jug. Hgt. 29.2 cm. Disc-base, slightly convex. Circular rim. Double handle ending in flap. Greyish-brown ware mixed with grit. Surface covered with

EXCAVATIONS AT RĀS EL 'AIN. II

greyish-white wash, faded in great part. Decoration confined to upper half of vessel. The decoration is monochrome¹ in matt brown paint. Red colour, however, appears at one or two points, which indicates that originally the colour was red but turned brown by firing. Five bands were drawn round the neck, from the last of which hangs down a tassel-like border of vertical strokes of paint. (Cf. similar ornament on No. 106, Pl. XXX, 3 from Grave 5). On shoulder decoration of geometrical pattern between parallel bands. (Pl. XXV.)



78. Jug. Hgt. 24.9 cm. Disc-base. Double handle on shoulder. Reddish-brown ware. Originally covered with greenish-grey wash. (Pl. XXXI, 10.)
79. Jug. Hgt. 19 cm. Small flat base. Flat pinched lip. Reddish-brown ware, grey in section, with grit. Surface covered with red slip and burnished. Lip originally painted with a matt red band. (Pl. XXIX, 3.)
80. Juglet. Hgt. 12.6 cm. Small flattish base. Flat circular rim. Brownish ware covered with light-brown slip and burnished. Upper half decorated with red bands, the rim and the handle with strokes of paint. (Pl. XXX, 5.)
81. Juglet. Fragmentary. Similar in all respects to No. 80. (Pl. XXX, 6.)
82. Juglet. Hgt. 18.2 cm. Similar in all respects to No. 80. (Pl. XXIX, 4.)
83. Juglet. Hgt. 15.3 cm. Small flattish base, circular rim. Reddish-brown ware. (Pl. XXXI, 5.)
84. Juglet. Lower half extant. Flattish base. Red-brown ware, grey core. Dark-red slip. Burnished.
85. Juglet. Hgt. 16 cm. Flattish base. Pinched lip. Reddish-brown ware. (Pl. XXIX, 2.)
86. Juglet. Hgt. 12.8 cm. Flattish base. Tall neck. Handle (broken) attached to

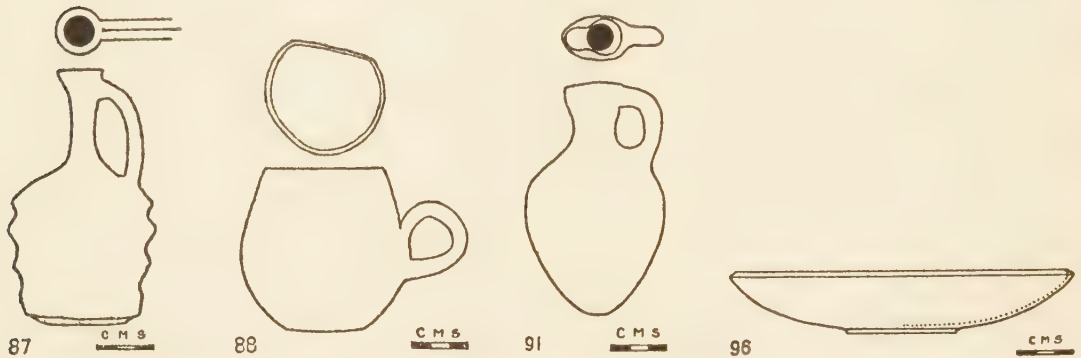
¹ In Pl. XXV the two-colour appearance of No. 77 is misleading.

rim. Reddish-brown ware. Grey core. Burnished over red slip. (Pl. XXX, 11.)

87. Bottle. Hgt. 13.1 cm. Squat base. Double handle. Brown ware. Covered with red slip and continuously burnished throughout. A thumb impression left on the body surface indicates that the grooves have been made by pressing the thumb against the vessel while turning on the wheel. (Pl. XXIX, 5.)

Grave 4.

88. Cup. From south recess. Hgt. 9.2 cm. Flat base. Reddish-brown ware with grit, combed surface, orifice irregular. (Pl. XXX, 17.) (See p. 103.)



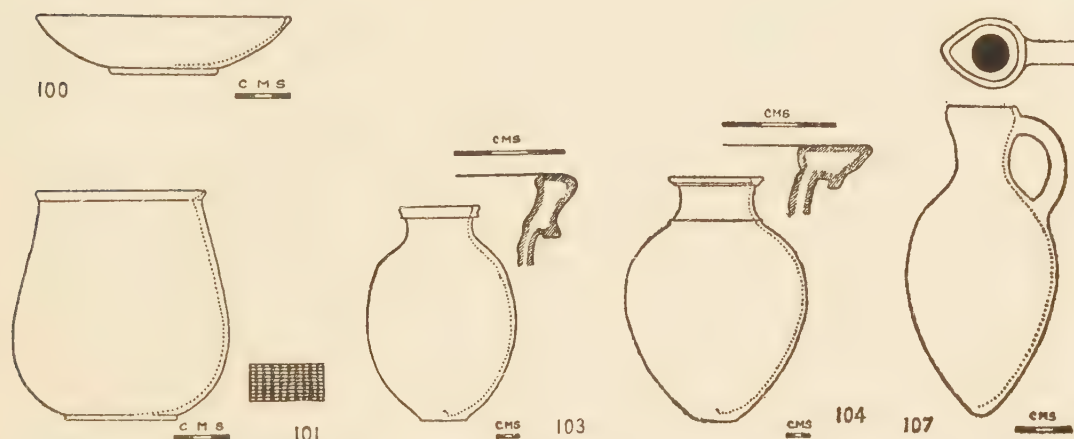
89. Jug. Hgt. 28.4 cm. Ring base, rim pinched at middle, divided handle standing askew, attached to ridge on neck and ending in flap. Ware, reddish-brown, covered with white wash. Decoration bichrome in black and red paint. (Pl. XXV.)
90. Jug. Hgt. 30.7 cm. Decoration confined to upper half of vessel. Similar in other respects to No. 89. (Pl. XXV.)
91. Juglet. Hgt. 12 cm. Flattish base, pinched lip, reddish-brown ware, combed surface. (Provenance from south recess.) (Pl. XXX, 1.)
92. Hgt. 11.8 cm. Grey ware. Similar to No. 91 in all other respects. (Pl. XXX, 2.) (From south recess.)

Grave 5.

93. Bowl. Diam. 36.5 cm. Disc-base, folded rim, reddish-brown ware, covered with white wash (worn). Exterior wheel-marked. (Pl. XXX, 23.)
94. Bowl. Diam. 36.9 cm. Disc-base, grooved rim, ware as in 93. Rim and interior covered with a creamy-white slip or wash. (Pl. XXX, 24.)
95. Bowl. Diam. 35.5 cm. Base and ware as in No. 93. Rim and interior covered with cream slip and burnished from rim to centre. (Pl. XXIX, 24.)
96. Bowl. Diam. 18.2 cm. Concave disc-base, grooved rim, reddish ware containing grit, burnished internally. (Pl. XXIX, 25.)

EXCAVATIONS AT RĀS EL 'AIN. II

97. Bowl. Diam. 12.7 cm. Disc-base, reddish-brown ware, red slip burnished over rim, exterior, and base, combed surface. (Pl. XXIX, 10.)
98. Bowl. Diam. 12.5 cm. Flat base, reddish-brown ware mixed with grit showing on surface. (Pl. XXIX, 8.)
99. Bowl. Diam. 11 cm. Carinated. Resembling in all other respects No. 66. (Pl. XXIX, 11.)
100. Bowl. Diam. 13.1 cm. Plate, disc-base, reddish-brown ware, burnished inside, outside, and over base. (Pl. XXIX, 7.)
101. Goblet. Hgt. 11.4 cm. Disc-base, grooved rim, reddish-brown ware, well levigated, burnished vertically light-brown over combed surface. (Pl. XXIX, 9.) Cf. Petrie, *Ancient Gaza*, II, Pl. XXIX, 31V7, 31V8 (XIIth Dynasty).



102. Jar. Hgt. 54.5 cm. Amphora, rim grooved inside as in carinated bowls, grey core with lime grit, reddish-brown ware, covered with greenish-grey wash, partly faded. (Pl. XXXI, 7). (Cf. *RA*, No. 75.)
103. Jar. Hgt. 28.9 cm. No handles, reddish-brown ware, remains of light-grey wash over rim and exterior. (Pl. XXXI, 3.)
104. Jar. Hgt. 32 cm. No handles, thin mould at base of neck, reddish-brown ware covered with light-grey wash (faded), finely combed surface. (Pl. XXXI, 9.)
105. Jug. Hgt. 24.6 cm. Flattish base, pinched lip, neck restored. Reddish-brown ware, upper part decorated with red painted lines. (Pl. XXXI, 4.)
106. Jug. Hgt. 29.2 cm. Flat base, rim broken, reddish-brown ware. Decorated with black and red bands. Fringe of tassel-like vertical strokes in red resembling painted vase No. 77, from Grave 2. (Pl. XXX, 3.)
107. Juglet. Hgt. 16 cm. Flattish base, reddish-brown ware, burnished vertically. (Pl. XXXI, 1.)
108. Juglet. Hgt. 17.5 cm. Similar to No. 107. (Pl. XXXI, 2.)

Grave 6.



109. Jug. Hgt. 27 cm. Flattish base. Flat-pinched rim. Reddish-brown ware. (Pl. XXX, 4.)



Various fragments of cooking-pot rims are illustrated on Pl. XXXIV; rims of jars on Pl. XXXII A, 4, 6, 7, 8; a loom weight on Pl. XXXII A, 2.

B. Bronzes

109



1. Dagger. Fragmentary, c. 12.3 cm. long, from Grave 4. Rivets in position. (Pl. XXXII B, 2.)
2. Spear-head. Socketed. 14.5 cm. long, from Grave 4. (Pl. XXXII B, 7.)
3. Dagger. From Grave 5. Rivets in position. (Pl. XXXII B, 6.)
4. Spear-head. Socketed. Fragmentary. c. 9 cm. long, from Grave 2. (Pl. XXXII B, 5.)
5. Spear-head. Found at 41 M (N. extension). (Pl. XXXII B, 1.)
6. Spear-head. Found together with vessels Nos. 35 and 53 at 31E-505. (Pl. XXXII B, 3.)
7. Pommel head. From Grave 5. (Pl. XXXII B, 4.)

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Lime
deposits
and filling
underneath



1. South side of



2. General view of excavations, 1936, looking west.



os, looking south.



3. South-western corner of excavations.



1. Grain pit.



2. Grave No. 2 open. Pottery *in situ*.



3. Grave No. 2, looking east. Burial visible after removal of pottery.



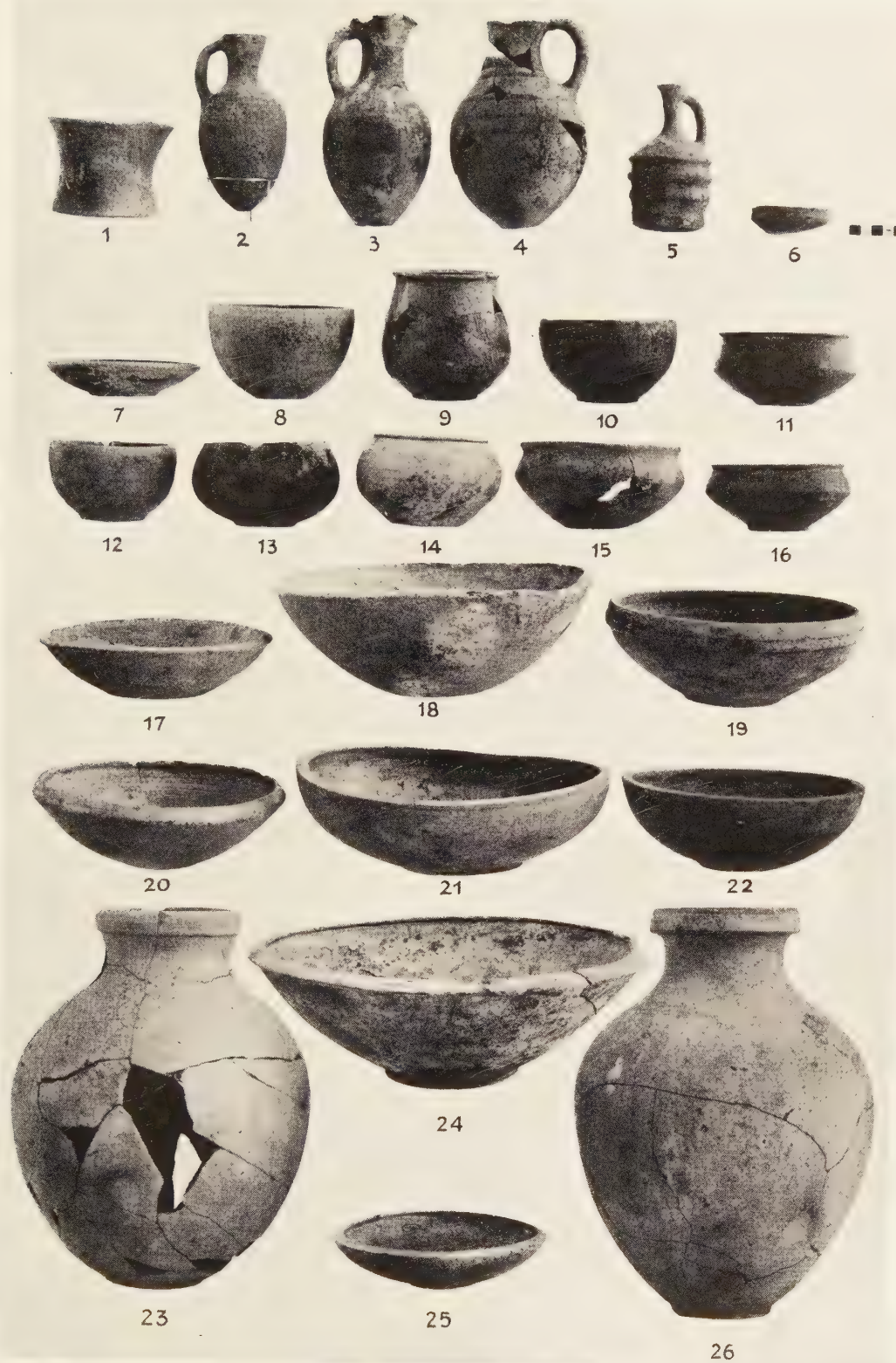
1. Grave No. 5, looking west.



2. Grave No. 4.



3. Grave No. 4 (roofing).



Pottery.

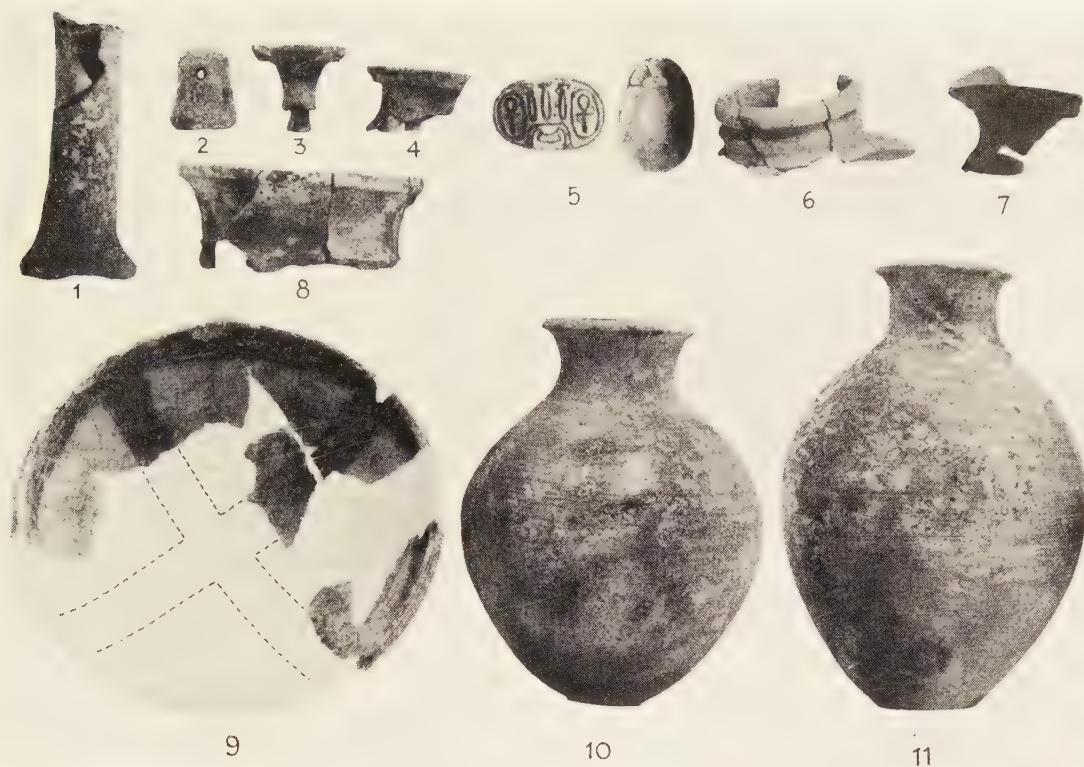


Pottery.

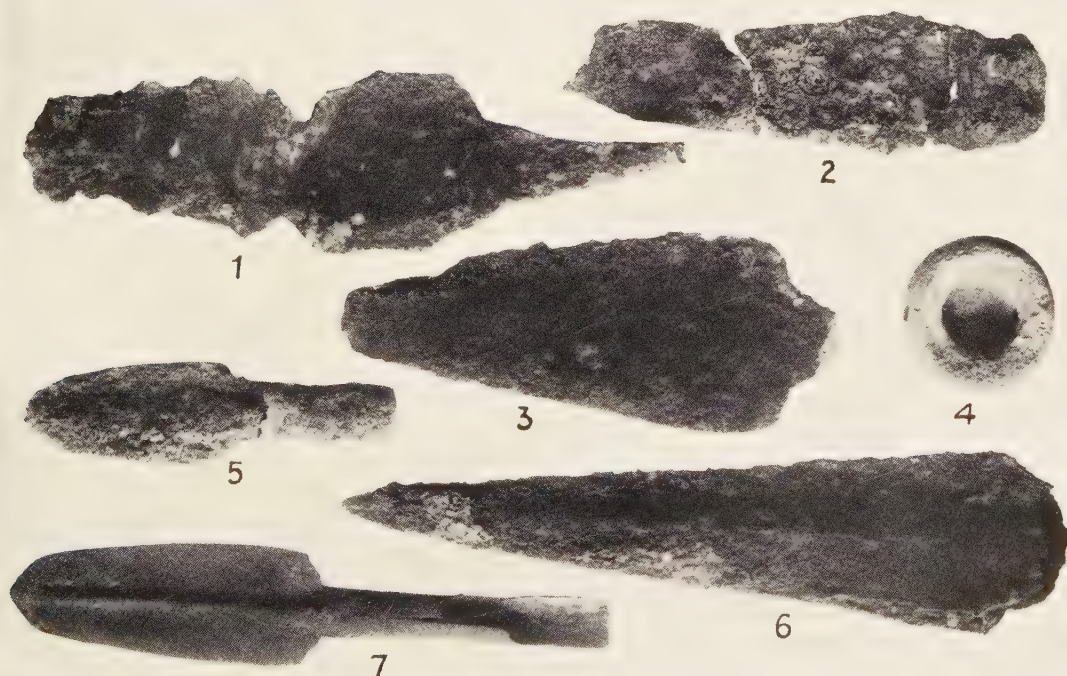
EXCAVATIONS AT RÂS EL 'AIN. II



Pottery.



A. Pottery and scarab.



B. Bronzes.



Pottery.

EXCAVATIONS AT RÂS EL 'AIN. II



Pottery fragments.
EXCAVATIONS AT RÂS EL 'AIN. II

EXCAVATIONS AT PILGRIMS' CASTLE, 'ATLĪT (1933): CREMATED BURIALS OF PHOENICIAN ORIGIN

IDEALLY suited to Phoenician enterprise as it obviously must have been, 'Atlīt has already yielded evidence of Phoenician intercourse during the latter part of the Persian period; the shaft-graves of the fifth and fourth century B.C. displayed a mixed culture, including Egyptian and Greek elements, but fundamentally Phoenician.¹ The cremated burials now described take that Phoenician connexion back into the Assyrian period, and show that a permanent Phoenician settlement had then come into existence at 'Atlīt, with a varied culture representative of that period of Phoenician predominance in the Mediterranean. This article first describes how the burials were found and what evidence there was for the fact of cremation. It then discusses the pottery, classifying it as to origin, local or foreign, and comparing the latter with pottery typical of Phoenician sites elsewhere, where cremation was the rule also. On such grounds, it is argued, the burials may be dated between the end of the eighth century and the sixth century B.C., that is, in the period immediately preceding that of the shaft-graves. Like the similar burials found at certain other sites in Palestine, they must be regarded as Phoenician; and as such they corroborate the suggestion already advanced on topographical and historical grounds that 'Atlīt should be identified with the site of a Phoenician colony of that period. A catalogue of the burials with illustrations of their associated objects concludes the article.²

1. *Situation*

In describing the ancient tell which underlies the Crusader remains at 'Atlīt behind the beaches east and south of the castle, it was noted how its southward extension can be traced as far as the outbuildings at the foot of the rocky ridge on which stood the south-east fort, under which part of the cemetery of the Persian period was found (shown as 'shaft-graves' in the accompanying sketch-map, p. 122).³ A little of the southern extremity of the tell still remains; north of the fort, between the town-wall and the outer yard, which contained a well and watering-trough, it rises to a height of four metres above the beach. The rest must have been cleared away by the Crusaders in digging the fosse and foundations of the wall on the one hand, and in levelling the yard on the other.⁴ In order to continue the level of the roadway which existed outside

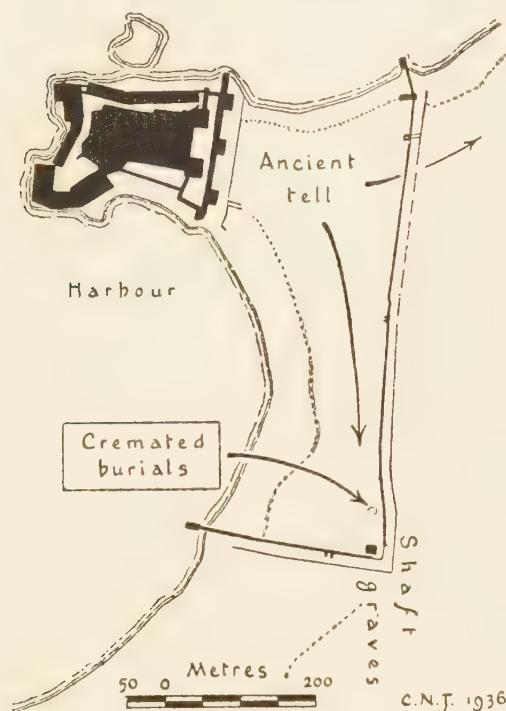
¹ *QDAP*, Vol. II, pp. 41 ff.

² The drawings of objects are the work of Mr. H. E. Bird, to whose care the recovery of certain forms is due.

³ Cf. *QDAP*, Vol. III, pp. 145 ff.; Squares R-18, S-18 in map opposite p. 145.

⁴ *Ibid.*; Vol. V, p. 58 and Fig. 21, p. 59.

the yard, they probably had to clear away a certain amount of an older slope both south and east of the well: southwards as far as the foot of the rocky hill, up which climbed a path to the fort, and eastward to within a few metres of the town-wall, where they built a rubble wall to retain what remained of the older slope. Among its tumbled stones were sherds ranging from Late Bronze



to Persian and Hellenistic which must have been washed down from the face of the cutting behind. But between this retaining-wall and the well, itself rock-hewn but surmounted by a head of three courses of masonry, only half of which stood above ground-level, the last of the previous accumulation survived. Here, in the filling of a natural depression of the rock, steadily increasing with the fall of the hill northwards, the burials were discovered (Fig. 1, opp.).

Comparison of the levels of the burials also showed a fall northwards, though less inclined than that of the rock. Those at the south and west edges of the depression, that is, at the foot of the hill, lay only about 30 cm. below the level surface of the medieval yard, and almost directly on the rock. Towards the north-east they became progressively deeper, and underneath them there was an increasing quantity of sand. Those at the corner itself lay 50 cm. or more below the bottom of the medieval walls, and on an accumulation of sand quite as deep. If their depth was originally at all uniform, it seems that they must have followed a sandy slope that then, as before the present excavations, covered the hill to a greater height than it did after the medieval clearance.

Thus it is conceivable that the burial ground once extended farther in every direction. Among the first indications of an older layer below the surface of the yard were stray Hellenistic and earlier sherds, beads, and metal fragments, picked up, together with objects of the medieval occupation, from the sandy floor around the well and the horse-standing beside the trough. They included sherds typical of the yet undisturbed burials in the depression to the east; such metal fragments as an ear-ring like Fig. 15, 1-2, p. 150, and

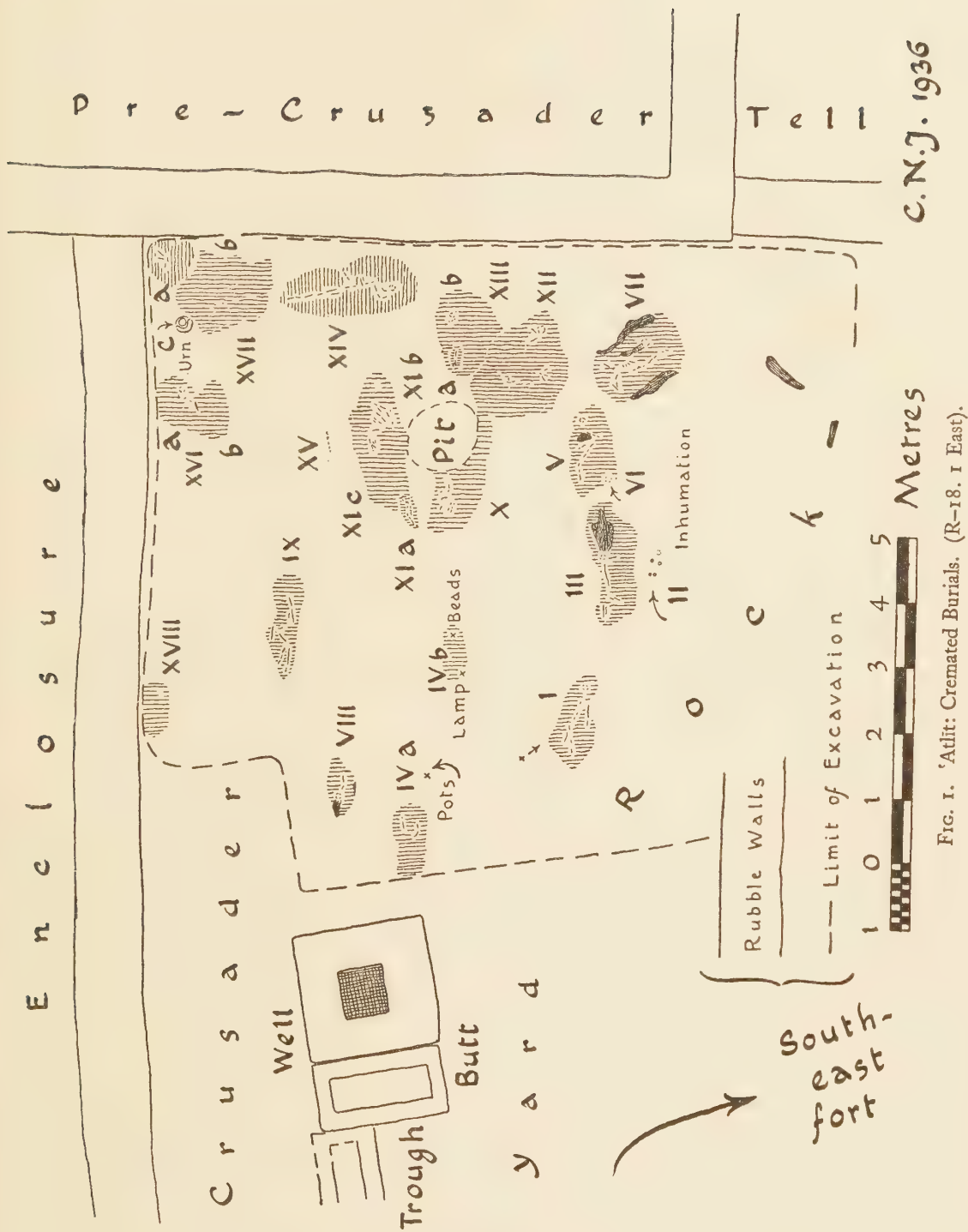


FIG. 1. 'Atlit: Cremated Burials. (R-18. I East).

a glass pendant-bead, Fig. 2. Quite possibly some of these objects represented the debris of graves which were destroyed when the well was excavated and the trough put in, or when the small trial-pit east of the well was sunk to the rock. The foundations of the well-head had certainly dismembered two of the burials which overlapped it (Fig. 1, iv *a* and viii). Similar debris, ancient



FIG. 2. Bead, clear greenish glass.

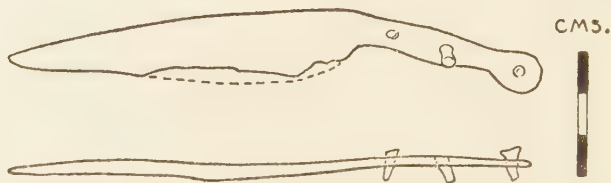


FIG. 3. Iron knife.

and medieval, e.g. the iron knife of Fig. 3 above, occurred in the shallow filling of sand at the south edge of the depression, suggesting that the medieval clearance had disturbed ancient burials there also. North and east of the well the extent of the burials has been only partly explored. At least two of those excavated were partly covered by the medieval walls that formed the limits of the present clearance (Fig. 1, xvii *a* and xviii). It seems very likely that the burial-ground extends farther on both sides, and quite unlikely that it has been interfered with by medieval operations anywhere else inside the town-wall.

2. Condition

With the exception of one ordinary inhumation (ii), and a jar burial (xvii *c*), the burials were all marked by traces of burning. In most cases they were first distinguished as patches of black charcoal in the cleaner sandy filling of the depression (Pls. XXXV–XXXIX).¹ The charcoal consisted for the most part of a fine powder, mixed with the sand to a depth of a few centimetres; but sometimes whole pieces occurred, as for example with burial vii, where the skeleton was almost enclosed by two large pieces (Pl. XXXVII, 2). In other cases the burials were marked by patches of darker sand without any charcoal, but reddened by fire. The bones found in either the blackened or reddened sand were almost always white and hard, in contrast with the bones of an inhumation such as (ii), which were brown and crumbling; though bones found towards the edges of the burnt patches sometimes resembled the latter. In no case were the skeletons at all complete. Some of the smaller bones were

¹ These photographs are a selection from the full record of the separate burials kept in the Records Office of the Department of Antiquities, Jerusalem.

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intact, and sometimes enough of the skull remained to identify it by (e.g. Pl. XXXVI, 2); but every long bone was broken. Yet the existing pieces were obviously *in situ*, and usually sufficient to show the general direction and posture of the skeleton, if not its full extent. Presumably the missing bones or fragments had been wholly reduced before the fire was damped down with sand; those partly calcined or yet unburnt were so preserved, while the embers of the fire were reduced to charcoal.¹

The pottery associated with these burials had suffered similarly from the effects of fire. Often its surface was not only blackened with charcoal, but also discoloured from red or buff to varying shades of brown and yellow. Often the polished red slip had powdered away altogether. The body of the ware was generally affected also; often it was reduced to a crumbling condition, which required consolidation with dilute celluloid cement before it could be mended. In this condition it was occasionally encrusted with lime from the calcined bones. Missing fragments had presumably been entirely reduced to earth. This is the more likely as in such cases the surviving sherds were scattered; it seemed as if the pots had been deliberately smashed and only the fragments farthest from the centre of the fire had escaped. Even where the pots had evidently been carefully deposited and still remained *in situ* they were cracked (e.g. Pl. XXXVIII, 2); or else warped by fire, as reconstruction of the more delicate forms proved (e.g. burial vii, p. 144). The solitary exception found in normal condition was the covered, two-handled urn which was buried close to the patch of charcoal marking burial xvii b (Pl. XXXIX, 3); but this jar, which contained partly calcined bones in a greyish filling probably

¹ The Government Analyst reports as follows:

'I have examined the specimens submitted and find undoubted evidence of fire on the bones and the surrounding soil.

'I find pieces of bone which are completely blackened and others where the outer casing is white and the centre (marrow) is carbonized. There are a few pieces of bone which are apparently unburnt of a yellowish colour, and others which are partially burnt.

'The following analysis of two pieces of bone from the specimen labelled "R-18. 1 E burial (i) from ends of legs" may be of interest:

	<i>Burnt</i>	<i>Unburnt</i>
	%	%
Moisture . . .	0.10	4.4
Carbon dioxide . .	1.2	4.4
Total nitrogen . .	0.75	1.7
Loss on ignition . .	1.3	29.0

'Loss on ignition is the loss in weight after heating at about 600° C. for half an hour.

'It will be seen that nitrogen is still present even in the burnt bone, and the fact that ammonia is evolved when the bone is ignited indicates that some, at least, of the nitrogen still exists in organic combination. The original incineration was therefore not sufficiently intense to destroy all organic matter.'

containing ashes, clearly represented a separate burial (xvii c), probably subsequent to the one beside it.

The condition of both the bones and the accompanying pottery of all the burials, except (ii), leaves no doubt as to the fact of incineration. It seems that the bodies were laid on a small pyre of branches, surrounded by the usual grave furniture of pottery, and so burnt; though in most cases, the fire seems to have been extinguished with a covering of sand before the body had been entirely consumed. Apparently there was no uniformity either in the direction or posture of the body; in some cases, such as i (Pl. XXXVI, 1) and xiv (Pl. XXXIX, 1), it seems to have been extended, but in others, notably vii (Pl. XXXVII, 2), it must have been flexed; in the last case the position of the skeletal remains might have been due to contraction under heat but for the fact that they all lie between two large pieces of charred wood which clearly outline the funeral pyre. Persons of all ages were so treated. In cases where the skeletal remains gave a more or less complete outline of the skeleton in the charcoal, their extent varied from only 45 cms. to as much as 1 metre 10 cms. where fully contracted, 1 metre 30 cms. where partly flexed, or 1 metre 60 cms. where fully extended. But owing to the partial reduction of the remains by fire, their extent was obviously only an approximate indication of the size and age of the bodies at the time of cremation. Therefore in a few representative cases the remains were removed and submitted to osteological examination, from which it is reasonably clear that the burials included adults and adolescents as well as infants.¹

¹ The Deputy Director of Medical Services has contributed the following notes on the skeletal remains thus selected:

The specimen from burial (i) (cf. Pl. XXXVI) consists of:

(a) fragmented bones of the vault of the skull alongside which is a portion of body of the mandible. The alveolar margin has largely disappeared, only the lower parts of the sockets of the incisors being recognizable. The size of the portion of the jaw, as judged from its outline, corresponds to that of an adult. The fragments of the cranium appear in thickness and general size also to be those of a fully grown skull. Portions of what apparently are the femur and the centre portion of a clavicle also support the impression that the remains are parts of a skeleton of adult size.

(b) portions of the bones of the forearms. The longest fragment is about 13.5 cms. long (5.25 inches). The bones have split longitudinally as well as transversely and have been subject to some distortion through pressure when soft at some period. The bones appear somewhat light in structure suggesting that they may possibly be the remains of a female skeleton. It is unfortunately not possible from either the skull or the portions of long bones to furnish any more precise evidence of age or sex in the case of this specimen.

The specimen from burial (vi) comprises fragments, roughly one inch square, of the vault of the skull, extending about one inch on either side of the sagittal suture from the coronal suture to about the region of the obelion. Beneath, embedded in the soil, is seen the right side of the occipital bone unbroken. The skull has been crushed from above downwards. The crushing effect has separated

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3. *The Objects*

The majority of the burials discovered in the sand, the urn-burial being a case apart, seemed to have been furnished with pottery. It was almost always broken and rarely at all complete; with some burials only a few odd sherds were found; but wherever there were sufficient to recover a significant part of the form of the pot, it seemed likely that it had been ceremonially deposited or else smashed over the body as a burial gift. Normally it was placed at the head or feet, or both; occasionally at the side of the body; and generally the pots or fragments were grouped close together, sometimes heaped on top of each other (e.g. burial xi *b*, Pl. XXXVIII, 2). Thus, where sherds of the same pot were found scattered, it must be assumed that the pot was deliberately smashed; some of the sherds of the long jar with burial v, for example, were used to cover the skull of a neighbouring burial, vi (Pl. XXXVII, 1), and some of the sherds of a similar jar covered the charcoal-strewn area of burial xvii *b*. In the case of burials which lay near the edge of the excavated area (xiv, xvi, xviii), where only a few scattered sherds were found, it seems just possible that others may remain outside. Considering only the eighteen cremated burials which lay clearly within the area, eleven out of the eighteen, besides the urn, appear to have had pottery definitely associated with them.

Certain of the forms were common to several burials, especially types of plain, rough ware; most occurred at least twice; only a few were unique (Figs. 4-14, 16, 19, pp. 139 ff.). The types may be classified under fabrics as follows. *First* and commonest was the coarse pottery of red or buff clay containing white grits, which occurred in several domestic forms, viz. slightly

the parietal bones along the sagittal suture and separation has also occurred at the coronal suture without leaving portions of the frontal bone adherent. The length from the bregma along the sagittal suture of the portions remaining as they lie *in situ* is 10.5 cms. (4.2 inches), which suggests that the skull was fully grown. The portion of the occipital bone which can be observed without moving the fragments is also approximate in size to that of a fully-grown skull. Under the processes to which the skull has been subjected separation has apparently occurred easily along the intricate lines of the suture, without damage. The occipital bone appears rather light and thin as also the portions of the parietal vaults.

From these indications it seems that the skull was probably that of a young person.

The specimen from burial (viii) (cf. Pl. XXXVIII, 1) consists of five small fragments of bone, the largest of which are approximately one by one and a quarter inches. The fragments are thin, and three show a slight convexity. The concave surfaces of those portions show remains of the lamellae of cancellous structure of the interior of a large bone. The fragments from their slight convexity appear to be portions of the anterior aspect of the distal end of a femoral bone of adult size.

The specimen from burial (xi b) (cf. Pl. XXXVIII, 2) consists of a mass of small fragments of bones embedded in sand and fixed with cellulose. There are numerous flat bones identifiable as portions of the vault of a skull. They are extremely thin and there is little doubt that they are portions of the skull of a child.

carinated bowls; flat saucers; decanter-shaped jugs; juglets or dippers; lamps with flattened rim and rounded bottom; chalice-shaped censers; long amphorai with vertical lip and squarish shoulder; and, in one instance each, a deep cooking-pot, mortar, and goblet. There was also a lamp of thin terra-cotta. *Second*, and far less common, was a fine buff ware, very smoothly burnished or polished, and either coated with a red slip which was similarly finished, or painted in two colours, black and red; of the red-slip variety there were fragmentary oenochorai and flat-bottomed saucers; of the bichrome variety, a pair of miniature handle-ridge jugs and a tall flat-topped bottle. *Third*, and still rarer, was a gritty red ware, covered with a pinkish slip, possibly white originally, and painted with encircling bands and zigzags in purple-brown; of this there were two amphorai of unusual form, and also an amphoriskos, which shows traces of similar decoration.

With the exception of the urn and the terra-cotta lamp, none of these types were found singly; each of them was combined in one burial group or another with some form which occurred in some other group. In several groups two or three of the commoner forms were combined; in one group or more they were severally combined with the rarer forms; or the latter were combined with one another. The pottery types thus form a series which links together eleven out of the twenty-one open cremated burials that were fairly fully examined; and to these eleven the urn may be added on account of the typical saucer which covered it. With the remaining ten cremated burials only scattered sherds were found, often representative of the wares already described, but too few to make up forms; as a general rule they were doubtless intrusive, having been thrown up in making or covering the graves, like the Late Bronze Age sherds (sub-Mycenaean, 'milk-bowl', *bil-bil* wares, &c.) which were commonly found throughout the filling close to the burials. But four of those ten burials had metal ornaments in common: 'boat-shaped' or 'leech-shaped' ear-rings of bronze or silver (as Figs. 11, p. 146; 15, p. 150), which were in each case found *in situ*, between fragments of the skull. Similar ear-rings were recovered in sifting the sand from near certain of the burials which can be related by their pottery (cf. Figs. 10, p. 145; 12, p. 147), but the association of those ear-rings with these burials was doubtful. Two other cremated burials were connected only by their carnelian beads, which also distinguished them from the rest. Nevertheless, from the levels of the burials and their spacing, it seemed unlikely that any of them were far removed from the rest in point of time; care had been taken not to disturb older burials in inserting newer ones, and the latest of them must have been inserted at a time when the position of the others was still known.

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4. *Parallels*

Setting aside the single inhumation, burial ii, the burials may be considered as a group connected, not only by the common fact of cremation, but also by their associated pottery. The bowls, jugs, jars, and lamps, which comprise the first class of plain, coarse ware, are fairly typical of all sites in Palestine which were occupied during the second, or middle, phase of the Iron Age. Of these sites, Tell el Fāri'a and Tell el 'Ajjūl on the southern desert frontier exemplify some of those forms¹ in association with cremated burials, but Tell Beit Mirsim near Hebron provides perhaps the fullest series of parallels to them alone, from among a remarkably large group of whole pots which must date from near the close of that phase. This group belongs to the last occupation there, which seems to have ended with the Babylonian conquest early in the sixth century B.C., hence the bulk of it can hardly be earlier than the end of the seventh century. However, very similar forms were in use throughout the country from as early as the tenth century down to the end of the seventh.² Within these limits presumably fall the commoner forms associated with the burials. It is true that in no instance do they show any trace of the bold hand-burnishing which is highly characteristic of the common ware of the period at other sites in the country; had they been so treated it is unlikely that the funeral fires would have destroyed all trace of the burnished red-slip on every sherd. But otherwise the pottery is so typical in ware and form that it may be regarded as most probably of the same period, and probably of local or not very distant origin.

The finer, decorated wares, which comprise the other classes of pottery associated with the burials, have on the contrary appeared but rarely in this country, and all seem to be of foreign origin. Best known of these is the delicate red-slip ware, highly polished or burnished, which is represented by fragmentary oenochoi (Fig. 6, p. 142), saucers (Figs. 6, 8, 10, 13, pp. 142 ff.), and a pair of bottles (Fig. 4, p. 139). This ware has lately been found at three other sites in the north of Palestine: Tell Abu Hawwām, near Haifa,³ Sabastye (Samaria), and Tell el Mutasallim;⁴ and taking these three sites together it

¹ See p. 132 below.

² W. F. Albright, *The Excavation of Tell Beit Mirsim*, Vol. I, *The Pottery of the First Three Campaigns* (Annual of the American Schools of Oriental Research, Vol. XII, 1930-1), Newhaven, 1932. In chap. vi, on the latest stratum (A), relationships with other tells are discussed, notably with Tell el Fāri'a (Beth-Pelet), Tell Jamme (Gerar), Tell es Sultān (Jericho), 'Ain Shems (Beth-Shemesh), and Tell el Mutasallim (Megiddo). For references to separate publications, see below, p. 139, note 2.

³ R. W. Hamilton, *QDAP*, Vol. IV, pp. 7-8, 67.

⁴ e.g., Nos. 36. 969, 36. 971, 36. 1898, 36. 1956 in the Palestine Archaeological Museum,

appears to have had a range of at least four centuries, from the eleventh to the seventh. It occurs occasionally during the same period in Cyprus;¹ from tombs at Amathus, there are examples of this ware representing forms such as the fragments found with the cremated burials seem to belong to, which can be dated to the seventh century, or the sixth.²

In one of the burial groups, iv *a* (Fig. 6, p. 142), combined with those types of oenochoe and saucer, were two miniature bottles of typical Cypriote form. Both were finished with a very smooth buff slip; the lip of one was clearly painted red both inside and outside, the inside of the neck with encircling black bands, the shoulder with hanging black circles one below the other, now faded to brown; and traces of red and black painting can be detected on the lip and neck of the other. So decorated, this form of bottle was contemporary in Cyprus with the red-slip ware previously described; from tomb deposits at Amathus and Marion it can be dated certainly from the sixth century, and possibly from the seventh.³

Apparently this bichrome style has not been recorded in Palestine hitherto. Similar bottles in the better-known black-on-red style are not infrequent on Iron Age sites, usually in strata or tombs assigned to the eleventh, tenth, or ninth centuries.⁴ But in Cyprus there is ample evidence that it was in use much longer, and eventually became concurrent with the bichrome style.⁵ Hence it is not impossible that both styles continued to reach the coast of Palestine, even after the earlier had ceased to penetrate far inland. From Tell el Mutasallim (Megiddo), which stood on a principal trade route from

provisionally dated between 1050 and 650 or after 600 B.C. by the Oriental Institute of Chicago; not yet published.

¹ J. L. Myres, *Handbook of the Cesnola Collection*, New York, 1914, p. 58: 'Red Bucchero Fabrics'.

² E. Gjerstad, &c., *The Swedish Cyprus Expedition*, Vol. II (Stockholm, 1935), cf. types of 'Red slip I (III)' ware, Pls. CXXV–VI, with colour-photograph on Pl. IV; from tombs at Amathus, Nos. 7 and 13, belonging to the end of 'Cypro-Geometric III' or to the succeeding period 'Cypro-Archaic I'. On the evidence of the excavation at Ajia Irini, the former period appears to have closed during the seventh century B.C., the latter to have lasted into the sixth, *ibid.*, p. 819.

³ *Ibid.*, Vol. II, cf. types of 'Bichrome IV' ware, Pl. CVI, 6 and 9, from tombs at Amathus, No. 8; Marion, No. 62; dated to the earlier part of 'Cypro-Archaic II', and therefore not later than the end of the sixth century B.C., *ibid.*, p. 818; and also Amathus, No. 7, 3rd burial stratum, Pls. XI–XII, dated 'Cypro-Archaic I', p. 45, cf. Note 5 above.

⁴ W. F. Albright, *op. cit.*, para. 95, p. 72, with references including Tell el Fāri'a; also at Tell el 'Ajjūl, Flinders Petrie, *Ancient Gaza*, Vol. II, London, 1932, Pl. XXXV; and Tell Abu Hawwām, R. W. Hamilton, *op. cit.*, cf. Nos. 86 and 87, p. 22 and Pl. XIII, and p. 6.

⁵ *Swedish Cyprus Expedition*, Vol. II, cf. types of 'Bichrome III' and 'Black-on-Red I (III)', Pls. CIII and CXIII; and Amathus, tomb 7, 2nd and 3rd burial strata, as above.

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that part of the coast where 'Atlīt is situated, comes a significant specimen of the black-on-red style which may be as late as the eighth century.¹

From the same site has come the only exact parallel that Palestine can supply to the larger bichrome bottle found with another burial, v, Fig. 7, p. 143.² Further inland only coarser imitations of the form have been met with, notably in the latest stratum at Tell Beit Mirsim which provides parallels to almost all the common local pottery associated with the burials.³ The bottle of Fig. 7, however, is to be compared in ware and decoration with the miniature bottles in bichrome style of Fig. 6, and in form with bottles of similar shape but different decoration, with which the miniature bottles are sometimes found in burial-groups of sixth-century, or even seventh-century, date in Cyprus.⁴

The origin of these foreign wares must be sought farther afield. It seems doubtful whether the polished red-slip oenochoi and saucers, or even the miniature bichrome bottles, were of Cypriote origin; the parallels which have been noted occur sporadically among rich deposits of the white ware, painted in geometric patterns, that was truly characteristic of the island. None of that has been found with the cremated burials at 'Atlīt. With three of them (Figs. 8, p. 144; 11, p. 146; 12, p. 147), there were vases, simply painted with horizontal bands and zigzags in purple-brown on a white or cream slip, that in form and decoration recall the native Cypriote, but have no exact parallel there, and may be regarded rather as attempts at imitation by a less skilful hand. These must have been imported to 'Atlīt along with the other wares foreign to Palestine. Some of those, notably the red, polished ware and the bottles in bichrome style, were presumably imported into Cyprus also at the same period. Where was the country of export accessible to both?

The answer is suggested by the frequent combination of these peculiar types of pottery at sites in the western Mediterranean, viz. Phoenician Carthage and Phoenician colonies in Sicily and Sardinia especially, where also cremation was the rule.⁵ Conspicuous among the native pottery found in graves

¹ C. Watzinger, *Tell el-Mutesellim*, Vol. II (Leipzig, 1929), pp. 79-80, 91, referring to G. Schumacher, Vol. I (Leipzig, 1908), Pl. XL e; *contra*, W. F. Albright, *loc. cit.*

² Palestine Archaeological Museum No. 36. 1899, Oriental Institute No. a. 275, provisionally dated c. 975-825; not yet published.

³ W. F. Albright, *op. cit.*, para. 116; cf. also Flinders Petrie, *Gerar*, London, 1928, Pls. XLVII, LX.

⁴ *Swedish Cyprus Expedition*, Vol. II, cf. type of 'Black-on-Red II (IV)' ware, Pl. CXV, 7; and groups from Amathus, tombs Nos. 7-9, 16, 25, *ibid.*, Pls. X, &c., and pp. 30 ff.

⁵ D. B. Harden, 'Punic Urns from the Precinct of Tanit at Carthage', *American Journal of Archaeology*, Vol. XXXI, 1927, pp. 297 ff.; see especially Fig. 20, p. 309 and note 2, p. 308. I owe my thanks to the author of this original study of the wide field of Punic pottery for first introducing me to these scattered parallels; to which an isolated tomb-group from Nahhaliya,

of the earliest period of Phoenician settlement at Carthage,¹ and at Motya in western Sicily,² among other Phoenician colonies, are just those types which appear to be foreign to both Palestine and Cyprus. To quote the description by the excavator of Motya,³ they include:

(a) A single-handled, elongated pear-shaped vase, tapering at the top to a small tri-lobed mouth, the handle being of considerable length and ribbed or grooved.

(b) A single-handled, bottle-shaped vase, with a flat mushroom-like mouth-top, the handle small and rounded.

The former

'is nearly always to be found painted over entirely with a dull reddish coating, very soft to the touch, this being possibly due to an extra dose of oil in the colour mixture';

while bottles of the latter type

'are also coated over with a soft unctuous paint, but not of one uniform colour throughout, as in the preceding type. They are usually found painted with dark bands on a lighter ground.'

Sometimes, to judge from examples found at Carthage,⁴ the latter were painted in the same colours and style as the bottle from burial v, (Fig. 7, p. 143), though not polished or burnished below the painted part of the neck. Even after allowing for differences in form and finish, it is with these two classes of west Phoenician pottery that the distinctive types of oenochoe and bottle from burials iv a, v, &c. (Figs. 6 and 7) can be compared most closely; while the bowl often found with cremated burials at Motya, described as being flat with straight sides,⁵ suggests the nearest comparison yet encountered to the unusual form of saucer from burials iv a, x, and xiii b (Figs. 6, 10, 13). At Carthage and Motya these types can be dated on independent evidence as early as the eighth century, and certainly from the seventh century.⁶

Further parallels between the western and eastern Mediterranean are supplied by the groups of cremated burials found in southern Palestine at Tell

Malta, may now be added, see M. A. Murray, *Corpus of the Bronze-age Pottery of Malta*, London, 1934, p. 6 and Pls. XLIV–XLVI. On the Phoenician affinities of Palestinian pottery at this period cf. C. Watzinger, *Denkmäler Palästinas*, Vol. I, Leipzig, 1933, p. 115.

¹ *Catalogue du Musée Alaoui* (Paris, 1897) 'M, Poteries Puniques', p. 220, Nos. 31–6, Pl. XLI; Gauckler, *Nécropoles Puniques de Carthage*, Paris, cf. Vol. I, Pls. CLIII, CCXI, CCXII, &c.; Harden, *op. cit.*, p. 308, note 2 and Fig. 20 opposite.

² J. I. S. Whitaker, *Motya, A Phoenician Colony in Sicily*, London, 1921, see Chap. VII on the Cemeteries, pp. 290 ff. on the pottery.

³ Whitaker, *op. cit.*, pp. 298–9; Fig. 73, p. 297.

⁴ Exhibited in the Musée Lavignerie, on St. Louis' Hill at Carthage, and in the Musée Alaoui at Tunis, room XII.

⁵ Whitaker, *op. cit.*, pp. 249 ff.

⁶ On the one hand, at both Carthage and Motya, Corinthian pottery was found in association with the typical local forms, at Motya proto-Corinthian also; on the other hand, in one sarcophagus at Motya (Whitaker, *op. cit.*, p. 246, No. 3), the characteristic mushroom-top bottle occurred with a black-varnished kylix. Cf. Harden, *op. cit.*, pp. 306 ff.

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el Fāri'a¹ and Tell el 'Ajjūl,² apparently the only other considerable groups known in the east. At both sites urn-burials were found resembling the single example from 'Atlīt, xvii c (Pl. XXXIX, 3). Some of the pots used as urns resembled the one used for burial xvii c (Fig. 19, p. 152); others the cooking-pot associated with burial i (Fig. 4, p. 139), or the water-jar found with burial v (Fig. 7, p. 143). The majority were large, footed amphorai or single-handled jars of types unknown among the contemporary inhumations between which they were buried, and without close parallels among the Iron Age pottery of the country, but quite typical of the Phoenician cemeteries in the west from the eighth or seventh century onwards.³ At the same time, the bowls used to cover the urns, and the small pots such as juglets or dippers and oil-bottles which they contained, were largely of the common local pottery of the tenth to seventh centuries, resembling not only the pottery found with the neighbouring inhumations, but that found with the 'Atlīt cremations also.⁴

The parallel with 'Atlīt is not quite complete. The oil-bottles found in some of the urns at the two southern sites were chiefly of the coarser form and decoration known at several sites in the south of Palestine between the tenth century and the sixth, and chiefly from the ninth to the seventh;⁵ there were none of the finer bichrome style which occurred with burial v at 'Atlīt, and which has been found at one other site in northern Palestine, Tell el Mutasallim, presumably because the style was actually of Phoenician origin, as its occurrence at western Phoenician colonies would suggest. Again, in some of the urns at Tell el 'Ajjūl near Gaza, as well as in some of the tombs at Tell el Fāri'a between which urns were buried, there were miniature bottles of the Cypriote handle-ridge type, painted with bands and circles in black on red, which has already been noted on p. 130 as unknown among the cremated burials at 'Atlīt. Yet one of the urns so associated at Tell el 'Ajjūl was of the type which, both there and at Tell el Fāri'a, almost exactly reproduces that of

¹ Flinders Petrie, *Beth-Pelet*, Vol. I, London, 1930; paras. 38-9, pp. 12-13; register on Pl. LXVIII, Nos. 215-19, 250-72; dated XX-XXII Dynasties.

² Flinders Petrie, *Ancient Gaza*, Vol. II, London, 1932; register, Pls. LVI-LVIII, various burials from No. 1022 to No. 1160. I have to thank Sir Flinders Petrie for kindly pointing out these and other parallels from his own excavations.

³ Types 33 D 2, S, Y, U, V 2; 34 U 2; 35 E; 36 H 1; 44 L 4; 45 K 1 and also 46 D, P 2 of J. G. Duncan, *Corpus of Palestinian Pottery*, and 31 L 3; 33 U 2; 34 U 2 of Flinders Petrie, *Ancient Gaza*, Vol. II, Pls. XXIX, XXX, may be compared with Harden, *op. cit.*, Figs. 2 (B), 4 (B), 5, 8, 10, 16, 17, types of 'Tanit 1' and early to middle 'Tanit 2', and with Whitaker, *op. cit.*, Fig. 72, p. 297.

⁴ Cf. Flinders Petrie, *Beth-Pelet*, Vol. I, Pls. XXXVIII-XLI, showing groups from several large tombs, Nos. 201, 221, 229, 240, &c., dated generally to Dynasty XXII. They also included ear-rings typical of the 'Atlīt cremations.

⁵ Cf. p. 131 above, note 3.

burial xvii c at 'Atlit.¹ By its association with the Cypriote bottle at Tell el 'Ajjūl this type of urn may be as old as any of the series of Iron Age pottery which the various urns of Tell el 'Ajjūl and Tell el Fāri'a commonly contained i.e. possibly of the tenth century. Even so, as it appears that very similar types of urns were introduced into the western Mediterranean during the eighth and seventh centuries by Phoenician settlers, their prototypes in the east must have survived little changed meanwhile; among them the urn of burial xvii c, which could consequently fall as late as the eighth or seventh century B.C.

5. *Probable Date of the Burials*

From a review of all the parallels to the pottery, both in the country and overseas, the period at which they were all current would appear to be about the seventh century B.C. Such a dating is not at variance with that of the only object found with the cremated burials to which an absolute date can be assigned, viz., an Egyptian steatite scarab found with burial xiv (Fig. 14, p. 149). It may be identified with either Osorkhon III (780-750) of Dynasty XXIII or Sheshonk IV (763-725) of Dynasty XXII;² and so gives the end of the eighth century as *terminus post quem* for that particular burial. Unfortunately there was no pottery which could be connected with the same burial; the few sherds of red-slip ware which were found in the charcoal may have come from the earlier filling or from the sand that was used to cover the grave. Hence no direct comparison can be made with the surrounding burials. Some, such as iv a, Fig. 6, p. 142, may well have been as late as the sixth century, as Cypriote analogies would suggest; while the urn-burial, xvii c, which has its counterpart in west Phoenician burials chiefly of the seventh century onwards, was in any case one of the latest of the group. The rest, however, were on the whole so evenly distributed, in spite of the apparent lack of cairns or grave-stones to mark them,³ that it seems unlikely that they were distant in time from one another more than a generation or so either way, and hence unlikely that they were much earlier or much later than the seventh century.

The end of that period, and probably of the vogue of cremation also, seems to be indicated by the single inhumation, burial ii, which clearly belongs to

¹ Type 33 D 2 of *Corpus of Palestinian Pottery*, with burial 1106, *Ancient Gaza*, Vol. II, Pl. LVII, in association with bottle of type 82 G 3, *ibid.*, Pl. XXXV, and scarab of *circa* Dynasty XVIII, *ibid.*, Pl. VII, 59, cf. Alan Rowe, *Catalogue of Egyptian Scarabs, etc., in the Palestine Archaeological Museum*, Cairo, 1936, No. 609, p. 146.

² Cf. p. 149 and note. The dates are taken from the *Cambridge Ancient History*, Vol. III.

³ None were found like those found at Motya (Whitaker, *op. cit.*, p. 271, Fig. 50), and at Carthage (Harden, *op. cit.*, p. 298, Fig. 1); even if they once existed, they would doubtless have been removed by the Crusaders in levelling the yard.

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the succeeding period of the first burials in the rock-cut shaft-graves higher up the hill. It may be compared, for example, with one of the original burials in tomb 21 B, also the burial of a small girl, which had similar beads, bracelets, and anklets, arranged in the same way.¹ To judge from the Saïte scarabs found with succeeding burials in the same chamber of that tomb, the earliest burials may there date from the sixth century, or even from the seventh. The end of the earlier vogue is perhaps represented by the cremated burial iv b, indicated by the lamp and beads found in the open space between ii and ix (cf. Fig. 1, opp. p. 122); the carnelian and stratified glass beads were especially typical of the shaft-graves, while the lamp may be compared with one found just inside the door of one of the chambers of tomb 23 B,² of a type current from the late seventh century to the fifth.³ On the evidence of these two burials it seems probable that the transition from cremation to inhumation coincided with the making of the first shaft-graves on the hill, probably during the sixth century, or early in the seventh.⁴

6. *Origin*

From analogies with known Phoenician settlements overseas, from Amathus in Cyprus to Carthage, Sicily, and Sardinia in the west, it seems clear that the three sites in Palestine where cremated burials have been found: Tell el 'Ajjūl, Tell el Fāri'a, and 'Atlīt, must all have had not only Phoenician trading connexions, but a Phoenician population. The pottery types distinctive of those burials, but foreign to Palestine generally, are most typical of Phoenician sites elsewhere. Especially significant are the urn and the oenochoe. While the recurrence of the oenochoe, the pear-shaped form in particular, may be explained by its use as a trade receptacle for a product not necessarily of Phoenician origin, the distribution of the urn must surely be explained by its intimate relation with the Phoenician traders themselves; they seem to have reserved it for funereal use and to have imported or copied it wherever they went with the persistence not unusual in burial customs. Occurring so close to Phoenicia itself, the urns at least may be regarded as prototypes of those which occur so constantly in the distant colonies of the west.⁵ With further excavation on the Syrian coast Phoenicia may also prove to be the home of such unusual forms as the geometrically painted amphorai found with two of the 'Atlīt burials (Figs. 8, p. 144; 12, p. 147) and the goblet found

¹ Burial (c-v), *QDAP*, Vol. II, pp. 78-82, Pl. XXVI.

² *Ibid.*, p. 92, Fig. 72 and Pl. XXXI.

³ Cf. p. 142, note 2.

⁴ At Motya too there was quite an abrupt transition, coinciding with the extension of the burial ground from the island to the mainland, apparently at about the same period, Whitaker, *op. cit.*, pp. 212, 244.

⁵ Harden, *op. cit.*, p. 308.

together with an amphoriskos in that style (Fig. 11, p. 146). And at 'Atlīt some evidence of reciprocal relations with the west is afforded by the iron knife found just above burial xvii *b* (Fig. 16, p. 151; Pl. XXXIX, 4) which has the recurved tip which suddenly appeared in the eastern Mediterranean at the beginning of the Iron Age (*c.* 1200 B.C.), but was characteristic of Sicily;¹ and again in the bronze pendant found nearby (Fig. 16, p. 151), which is modelled on the acorn or some other of the natural fruit-forms which were popular in jewellery throughout the eastern Mediterranean, as well as among the Phoenicians, during the eighth and seventh centuries B.C. Whether of Phoenician manufacture or not, these objects were doubtless introduced, like the pottery, through Phoenician agency.

Now of the sites in Palestine linked by material of this kind, two, viz. 'Atlīt and Tell el 'Ajjūl, are situated on the sea coast, while two more, viz. Tell el Mutasallim and Tell el Fāri'a, lay on inland trade-routes which may have been connected respectively with the other two. Of these, 'Atlīt in particular has just those natural features that always attracted the Phoenicians in establishing a foothold on a foreign coast.² There is no island of any size, as at Motya, but there is a promontory which could easily have been defended, and there is a sheltered bay with a broad, slightly shelving beach where galleys could have been landed. These features invited settlement, and that some settlement was established is proved by the cremated burials.

Although the practice of cremating the dead has rarely been reported from Phoenicia itself, yet it appears to have been quite usual in the Phoenician colonies farther west.³ It may have been adopted there from the migratory Greeks to whom it was native, probably out of the necessity of economizing space on a small island or promontory, often precariously held at first. Thus at 'Atlīt, as well as at Tell el 'Ajjūl and Tell el-Fāri'a, there can be little doubt that it was introduced by Phoenician settlers, along with the pottery foreign to the rest of the country. But while at the two southern sites the settlers seem to have been merely a minority within the native community, with whose tombs their urn-burials were mixed, at 'Atlīt there is every reason to suppose that they established an independent settlement. Although the cremated burials so far excavated form probably no more than a fraction of the whole burial-ground, yet it is clear that they were not mixed with inhumation.

¹ Flinders Petrie, *Tools and Weapons*, London, 1917, para. 63, p. 25; p. 65. The author kindly pointed out this connexion to me.

² Cf. Père F.-M. Abel's article, 'Le littoral palestinien et ses ports', *Revue Biblique*, 1914, pp. 556 ff.

³ Whitaker, *op. cit.*, pp. 211 ff.; G. Contenau, *La Civilisation Phénicienne*, Paris, 1926, p. 238, cf. Th. Macridy, 'Caveaux de Tell-el-Rachédieh, à Tyr', *Revue Biblique*, 1904, pp. 564-70.

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tions of equal date which might represent the local population. It is true that among the local pottery, which was used for burial-gifts here as at the two southern sites, there were included lamps, which were usually placed in tombs, not in urns; and it is remarkable that, in contrast with the southern sites,¹ and also with Motya,² urns seem to have been used only exceptionally. But these differences may imply no more than that the settlers at 'Atlīt were less divorced from their ancestral custom of inhuming the dead than their countrymen elsewhere. The fact remains that for a period of perhaps some generations cremation was practised solely, and then superseded, as at Motya, by inhumation in shaft-graves of the older Phoenician type. It seems probable therefore that the cremated burials belonged to the very beginning of a Phoenician settlement at 'Atlīt.

If the burials so far excavated can be taken as representative of the whole burial-ground, then the foundation of that settlement at 'Atlīt must have taken place quite early in the seventh century, or during the eighth. This is the time in Phoenician history when colonization of the Palestine coast is most likely to have been undertaken. Phoenician communities may have been in existence for two or three centuries within the native communities at older sites, as the cremated burials at Tell el 'Ajjūl and Tell el Fāri'a tend to show; but it seems unlikely that isolated colonies were planted before the period of Phoenician hegemony in the eastern Mediterranean. Now according to the traditional Greek 'List of Thalassocracies' in the eastern Mediterranean, the sea-power of Phoenicia came after the Cypriote, and was followed by the Egyptian, Milesian, and so on. If the Egyptian be identified, as seems most probable, with the rise of the Saïte or XXVIth Dynasty, beginning with Psammetichus I in 663 B.C., and the fall of the Cypriote with the submission of the Cypriote kings to Sargon II in 709 B.C., then the Phoenician, which traditionally lasted for 45 years, falls neatly into place (709-663 B.C.).³ Consequently, on historical as well as archaeological grounds, the close of the eighth century B.C. or the opening of the seventh seems to be a probable date for the founding of the Phoenician colony at 'Atlīt to which the cremated burials must have belonged.

The combined evidence of the cremated burials and of the shaft-graves in the south-eastern cemetery leads to the conclusion that 'Atlīt had a continuous Phoenician connexion, lasting from the Assyrian period onwards until the end of the Persian. But while the shaft-graves suggest some admixture of

¹ Flinders Petrie, *Beth Pelet*, Vol. I, and *Ancient Gaza*, Vol. II, *loc. cit.*

² Whitaker, *op. cit.*, pp. 248 ff.

³ J. L. Myres, *Journal of Hellenic Studies*, Vol. XXVI (1906), pp. 84 ff., especially pp. 117-20; the beginning of the XXVIth Dynasty should be dated 663, not 664, following the *Cambridge Ancient History*, Vol. III, p. 286.

Greek and Egyptian immigrants towards the end of the Persian period,¹ the cremated burials point to an originally unmixed Phoenician population, doubtless a colony established by a Phoenician metropolis for the purpose of trading with the interior. Some reminiscence of its Phoenician origin seems to have survived in the name of the Roman post-station established nearby, *Mutatio Certha*, which may have been derived from the Phoenician word for 'town', *garth*.² As a Phoenician colony of such standing 'Atlīt must presumably have had its place in the *Periplus* of the Greek admiral Scylax, which dates from the fourth century B.C. and contains the oldest extant list of the Phoenician colonies on the Palestine coast.

Between Carmel, 'the holy hill of Zeus', which is five sea-miles north of 'Atlīt, and Dōr, the modern village of Ṭanṭūra four sea-miles to the south, his list evidently included two Phoenician colonies. The first after Carmel was Arad, a town of the Sidonians; the second, apparently a town of the Tyrians, with a river, is nameless owing to a defect in the manuscript.³ Which of the two is Phoenician 'Atlīt more likely to have been? That it was the southern, nameless town of the Tyrians seems unlikely, for in that case the northern town, Arad, must have been somewhere north of 'Atlīt. But the inhospitable, sandy shore stretching towards Cape Carmel offers little refuge, least of all at Cape Carmel itself, where there is a tell which has been proposed as the site of Arad,⁴ yet which has neither natural advantages nor visible remains to be compared with those which exist at 'Atlīt and farther south. Between 'Atlīt and Ṭanṭūra, however, there are several safe beaches sheltered by rocky promontories, and half a mile inland there is a continuous row of quarries of Phoenician type, such as exist opposite 'Atlīt and Ṭanṭūra likewise.⁵ On those grounds, it seems likely that the nameless town of the Tyrians remains to be discovered somewhere between 'Atlīt and Ṭanṭūra; and that the cremated burials as well as the shaft-graves in the south-eastern cemetery at 'Atlīt belonged to Arad of the Sidonians.⁶

¹ *QDAP*, Vol. II, p. 56.

² F.-M. Abel, *Revue Biblique*, 1914, p. 581; M. Avi-Yonah, *QDAP*, Vol. V, p. 152 and map.

³ F.-M. Abel, *Revue Biblique*, 1914, pp. 580-1.

⁴ *Loc. cit.*

⁵ They are very like the quarries of Phoenicia itself, e.g., at 'Amrīt, north of Tripoli, and quite unlike the Crusader quarries which interrupt them opposite 'Atlīt.

⁶ If Phoenician 'Atlīt be identified with Arad, and not with the nameless colony which Père Abel proposes, *loc. cit.*, it is not difficult to suggest an alternative site for the latter. On p. 574 of the same article Père Abel suggests that Sarafand, the name of a village midway between 'Atlīt and Ṭanṭūra, stands for the Phoenician *Sarepta*, 'a foundry' or a place of glass manufacture, like the Sarepta between Tyre and Sidon. The modern village stands on the inland ridge where the ancient quarries are. About 1½ miles to the north the Wādi Māliḥa crosses the ridge, flowing through a gap which has been artificially deepened and widened. The wādi has a broader mouth than any of

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7. List of Burial-groups

(For plan of burial-ground, see Fig. 1, p. 123; photographs, Pls. XXXV-XXXIX).

Burial i.

Pl. XXXVI, 1-2. Incinerated; apparently extended, head east, adult. (Cf. p. 126, n. 1.)

Objects, Fig. 4.

1, 2, between thighs: miniature bottles, buff or reddish body, heavily encrusted with lime but showing traces of light-red slip. (Cf. p. 129.)¹

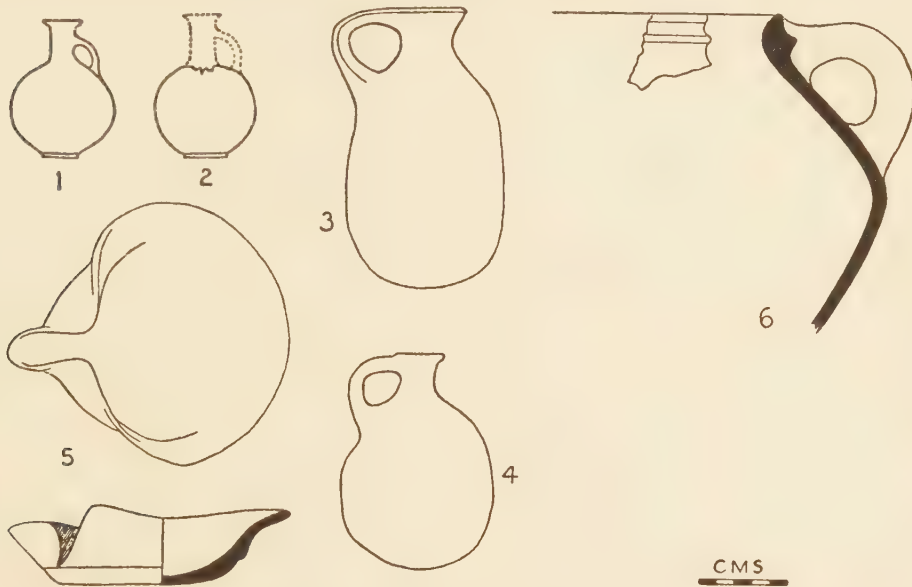


FIG. 4. Objects from Burial i.

3, 4, beside right thigh: juglets, buff and red ware, rough without trace of burnishing.

5, at 70 cm. to right of legs, upside down: lamp, buff ware, rough.

6, on chest: cooking pot, fragmentary, blackish ware with white grits.²

those nearer Carmel to the north, and may once have been deeper than it is to-day. About half a mile south of its mouth there is a rocky promontory with a small tell, *ʿaziret en Nāʿime*, which is like 'Atlit in miniature. (Sheets VII and VIII, War Office reprint of P.E.F. map, 1917.) The name of this promontory must mean 'the soft-soiled peninsula', so distinguishing it from others on either hand which are not covered by a tell. Iron Age sherds have been picked up on it, and on the beaches near it. Farther south, opposite the village of Sarafand, there are shaft-graves like those at 'Atlit and Ṭanṭūra. Is this the site of the Tyrian colony with a river, and Sarepta the missing name?

¹ The Palestine Archaeological Museum has an identical bottle from Tell el Mutasallim (Megiddo), No. 36. 971, not yet published.

² These specimens of coarse ware, together with others from the remaining burials, may be compared with those from the following sites: Tell Beit Mirsim, cf. W. F. Albright, *op. cit.*,

From the sand between this burial and the next were recovered fragments which make up the body of an oenochoe of fine buff ware with a burnished haematite-red slip, like that of burial iv *a*, Fig. 6, p. 142.

Burial ii.

Inhumation of small child, extended, head east. Cf. p. 134 and p. 135, note 1, referring to parallels in the shaft-graves.

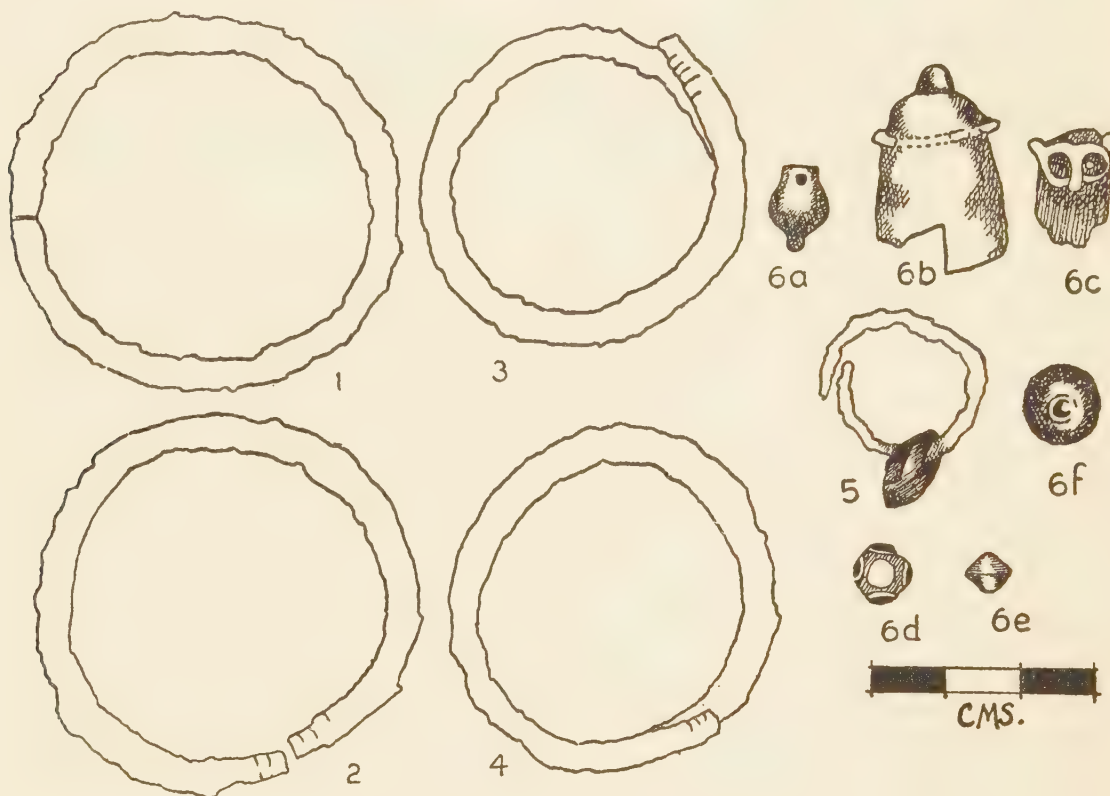


FIG. 5. Objects from Burial ii (Inhumation).

Objects, Fig. 5.

- 1, 2, at ankles: bronze anklets, ends meeting; remains of linen cloth adhering.
3, 4, at wrists: bronze bracelets, ends overlapping.

Stratum A, Pls. 32-9, 52-71; Tell Jamme, Flinders Petrie, *Gerar*, chiefly between elevations 185 and 196, Pls. XLVII-LXII; Tell el Fāri'a, Flinders Petrie, *Beth-Pelet*, Vol. I, Cemetery '200', Pls. XXXVIII-XLI; and J. G. Duncan, *Corpus of Palestinian Pottery*, *passim*; Tell es Sultān, E. Sellin—C. Watzinger, *Jericho*, Leipzig, 1913, 5th Stratum, pp. 136-46; Sabastye, G. A. Reisner, &c., *Harvard Excavations at Samaria, I* (1924), 'Israelite Pottery', pp. 276-81; and 'Ain Shems, E. Grant, *Ain Shems Excavations*, Parts i and ii, Haverford, 1931-2, Pls. XXXI-II, XXXV-IX, XLII-III, XLV, L.

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5, under skull: bronze ring, ends open, threaded through shell.¹

6, at right arm: group of glass ornaments, probably strung together:² (a) pendant bead, opaque pale-green glass;³ (b) pendant, opaque dark-blue glass, as bell or tassel for girdle;⁴ (c) model of ram's head (?), possibly part of pendant, opaque dark-blue glass, face and ears encrusted yellow, eyes white;⁵ (d) one of several stratified-eye beads, opaque pale-blue glass, eyes dark-blue and white;⁶ (e) circular bicone bead, clear greenish-blue glass; (f) standard circular bead, plain opaque reddish-brown glass.

Burial iii.

Incinerated; apparently a child, extended, head east, the upper part of the skeleton resting on a spade-shaped bed of charcoal, probably representing a single piece of wood. No objects were found.

Burial iv, a.

Some calcined bones, probably a child's, were found in caked grey sand underneath a group of pots, reconstructed in Fig. 6, Nos. 1-5. There were more bones and charcoal or cindery sand at the west, towards the well-head, the construction of which may account for the disappearance of the rest.

Objects, Fig. 6.

- 1, Oenochoe; mouth, handle, and base only; fine, buff body, coated outside with dull-red slip, carefully burnished.⁷
- 2, fragmentary saucer; similar ware with traces of red slip inside and outside; the surface now matt, but probably burnished originally as the similar saucer from burial x, Fig. 10, p. 145, *q.v.*⁸
- 3, miniature bottle, fragmentary; very fine, smooth buff body, with traces of decoration, e.g., encircling brown lines on outside of neck; perhaps discoloured red as on (4).

¹ Cf. ear-rings from Marion, tomb 85, No. 10, *Swedish Cyprus Expedition*, Vol. II, Pl. LXXXII, 2; 6th century B.C.

² Cf. Flinders Petrie, *Beth Pelet*, Vol. I, burial 749, Pls. XXVII and XLIII.

³ For form cf. Nos. 549, in gold; 644, in bronze, from shaft-graves L 21 and L 21 B respectively, *QDAP*, Vol. II, Pls. XXIII, XXV, and p. 53. In glass cf. necklace from Tharros, Sardinia, *British Museum, Catalogue of Jewellery* (London, 1911), No. 1545, Pl. XXIV; Phoenician, 7th-6th centuries B.C.

⁴ Cf. silver bells forming fringe of priest's girdle from a tomb at Polis-tis-Chrysokhou, Cyprus, *ibid.*, No. 1576, Fig. 45 and Pl. XXVI; archaic Greek, 5th century B.C.

⁵ For style cf. No. 218a from Tell Abu Hawwām, *QDAP*, Vol. IV, p. 35; central pendant in necklace from Etruria, clearly a ram's head, *B.M. Catalogue of Jewellery*, No. 1453, Pl. XXII; another, in glass necklace with types of our (a) and (d), also from Etruria, *ibid.*, No. 1454, Pl. XXIII; probably imports from Carthage, 7th-6th centuries B.C.

⁶ As commonly found in the shaft-graves, *QDAP*, Vol. II, p. 52, &c.

⁷ For parallels in Palestine and at Amathus in Cyprus see above, p. 129; at Carthage and Motya, p. 131.

⁸ For parallels, see previous note.

- 4, another; base and handle missing; very fine grey body with traces of smooth buff slip; the lip and upper part of the neck coloured red; encircling black bands inside the neck; concentric circles on the shoulder, one set below the other, discoloured to brown.¹
- 5, found covering the preceding pots: saucer, coarse buff ware with white grits.

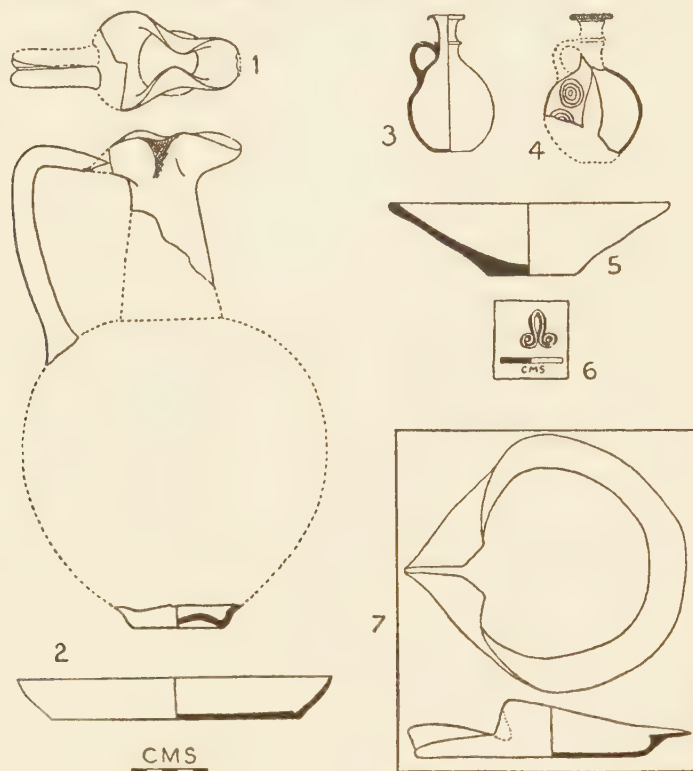


FIG. 6. Objects Nos. 1-5 from Burial iv a; Nos. 6-7 from Burial iv b.

Burial iv, b.

From another patch of blackened sand and bleached bones east of burial iv a, but not connected with it, Fig. 6 includes:

6, bronze eye for hook.

7, lamp, fine red ware as terra-cotta; found upside down, cracked but complete.²

From near the lamp on the north and east, came the following:

12 beads, viz. 4 glass as with burial ii, Fig. 5, No. 6 d, e, f; 4 carnelian, standard

¹ For parallels in Cyprus, see above, p. 130, note 3.

² Cf. No. 820 from shaft-grave 23 B, *QDAP*, Vol. II, p. 92. It has the form of a bronze lamp from Idalion, No. 134, *Swedish Cyprus Expedition*, Vol. II, Pl. CLXXXIX, 18; and of terra-cotta lamps from Ajia Irini, *ibid.*, Pl. CCXLI, and Marion, tomb 96, No. 3; *ibid.*, Pl. CLVII, 5; of 'Cypro-Archaic I and II', i.e., late 7th-early 5th centuries B.C. Cf. Flinders Petrie, *Gerar*, Pl. LXI, type 91 N.

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circular; 1 carnelian, standard bicone; 1 crystal, short bicone; 1 onyx, long barrel.

Bronze ring, 2 cm. diameter.

Fragments of iron finger-ring with flat, lentoid bezel.

Together with the lamp, these objects seem to form a group belonging to another cremation, iv *b*, probably contemporary with the inhumation, burial ii, and with the earliest burials in the shaft-graves.¹

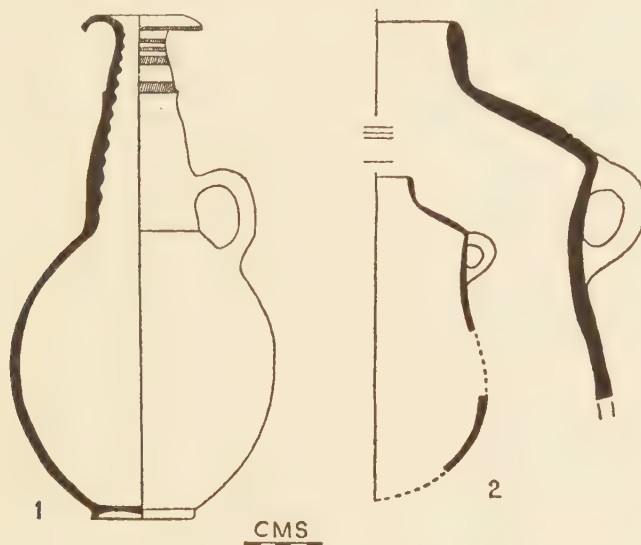


FIG. 7. Objects from Burial v.

Burial v.

Pl. XXXVII, 1. Incinerated; extended lying on right side, head east.

Objects, Fig. 7.

- 1, beside head: fragmentary bottle complete in profile, fine buff body, apparently burnished originally; lip and top of neck painted bright red, three encircling bands of black just below lip and another above ridge.²
- 2, against chest: part of top and belly of large amphora, rough red ware with fine white grits; some sherds had been removed to cover remains of burial vi, and others were found above burial vii.³ Amphorai of this form were found as urns at Tell el Fāri'a, see above, p. 132 f.

Burial vi.

Some calcined fragments of an adult's skull were found, covered by sherds

¹ Cf. generally tomb L 23 B, Chamber (c), *loc. cit.*

² For parallels in Cyprus see above, p. 130; at Carthage and Motya, p. 131.

³ Cf. Marion, tomb 10, No. 36, *Swedish Cyprus Expedition*, Vol. II, Pl. XL, 1, dated early 'Cypro-Archaic I', p. 214, i.e., late 7th century B.C. It looks like the prototype of the ollae of 'Tanit 2' type at Carthage, dated to the 6th century or later (Harden, *op. cit.*, p. 303).

from the jar which accompanied burial (v) Fig. 7, 2, but representing a separate burial, cf. Pl. XXXVII, 1 and p. 126, note 1.

Burial vii.

Pl. XXXVII, 2. Incinerated; skeleton apparently contracted between large pieces of charred fire-wood, head south.

Objects, Fig. 8.

- 1, south of head: amphora, practically complete, too warped to permit of actual reconstruction though possible to draw; gritty red body, covered outside with smooth pink slip; painted with encircling bands and 'lashing' pattern in purple-black.¹

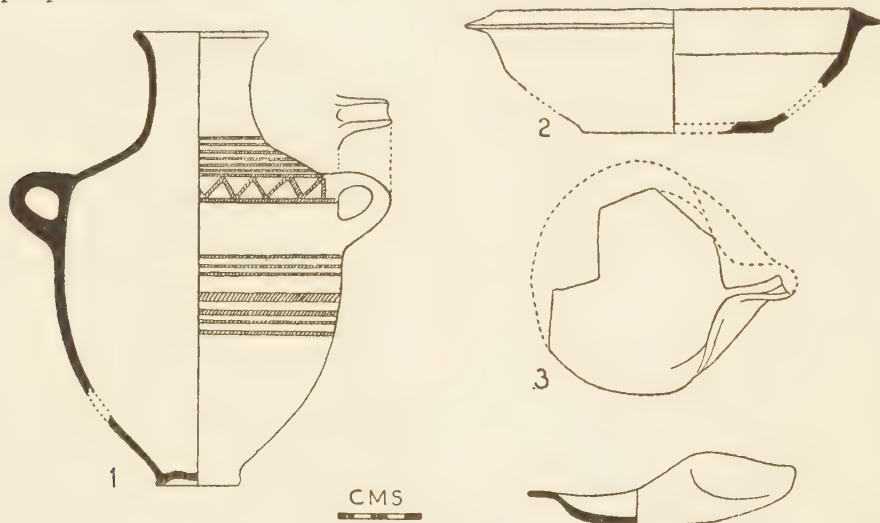


FIG. 8. Objects from Burial vii.

From among the sherds of the amphora came a compact lump, shaped roughly like a brazil-nut about 7 cm. long, of a substance which looks like dirty-white plaster, with a brittle crust, underneath which is a brown deposit smelling slightly of resin.

- 2, nearer the skull: fragments of a bowl, fine buff ware, evidently burnished and coated with a darker slip, which has been discoloured by fire.²

¹ The only close parallel from Palestine appears to be an amphora of somewhat similar form from stratum 5 at Jericho, E. Sellin—C. Watzinger, *Jericho*, Fig. 153, p. 142, which is described as being of polished red ware painted with encircling bands of purple-brown enclosing white, p. 142, B (1). But the type is not uncommon at Carthage to judge from Gauckler's rough sketches, *Nécropoles Puniques*, I, cf. Pl. LXXIV, &c.

² Cf. *Harvard Excavations at Samaria*, Vol. I, p. 292, Fig. 169, 19 a; Pl. 65 h, from cistern 7, dated not earlier than 700 B.C., p. 284; and *Corpus of Palestinian Pottery*, type 3 P, from one of the urn-burials at Tell el Fāri'a.

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Beside the skull there were also several pieces of melted lead.

3, at legs: lamp, coarse buff ware.

Burial viii.

Pl. XXXVIII, 1. Incinerated; only part of the skeleton was found, the rest having been destroyed in the medieval excavation for the well-head; it was probably extended, head west; apparently an adult (Cf. p. 127, note). At the east, presumably at the feet, were three pieces of coarse pottery: a jug as with burial i, Fig. 4, No. 3, and a bowl and lamp as with the next burial, ix, Fig. 9, Nos. 1-2.

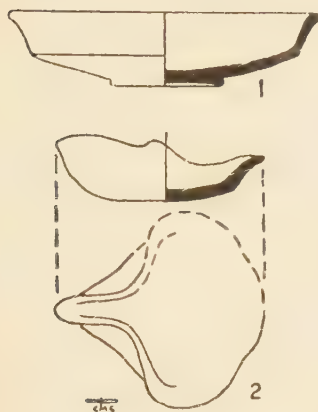


FIG. 9.

Objects from Burial ix.

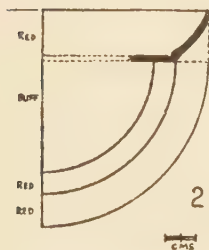
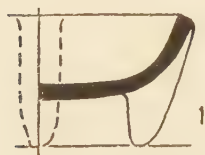


FIG. 10.

Objects from Burial x.

Burial ix.

Incinerated; remains of the skeleton extended for nearly 1 m. 50 cm., but were most fragmentary; the remaining scraps of bones at the east appeared to belong to the legs, hence the head probably lay west.

Objects, Fig. 9.

- 1, at east end: part of bowl, rough, reddish ware.
- 2, in two fragments, one at east near (1), the other about the middle: lamp, similar ware.
- 3, beside long bone, presumably tibia: fragments of bronze-wire ring, about 3 cm. diameter, and also scattered sherds of fine red-burnished ware as with burial iv a; long jar as with burial v (Cf. Fig. 7, No. 2) &c.

Burial x.

Incinerated; a child burial, apparently contracted, head north-west; partly disturbed at the east by a later trial-pit.

Objects, Fig. 10.

From sherds found at the legs and scattered about the skeleton, two forms have been recovered.

- 1, mortar of coarse grey ware, smoothed to resemble polished stone.
- 2, saucer; fine red body with buff slip; coated with a haematite-red slip or paint inside, and outside rim and round edge of base; burnished all over to a glossy finish.¹

¹ For parallels see above, p. 141, on burial iv a, Nos. 1-2.

From the cindery sand east of the burial were sifted:

3, silver ear-ring,¹

4, silver eyelet,

both evidently displaced, perhaps in the digging of the adjacent trial-pit, and therefore not necessarily associated with this burial.

Burials xi, a b, and c.

Burial xi *a*: incinerated, small child; from among the remains of the skeleton came a bronze ear-ring, Fig. 11, No. 6.

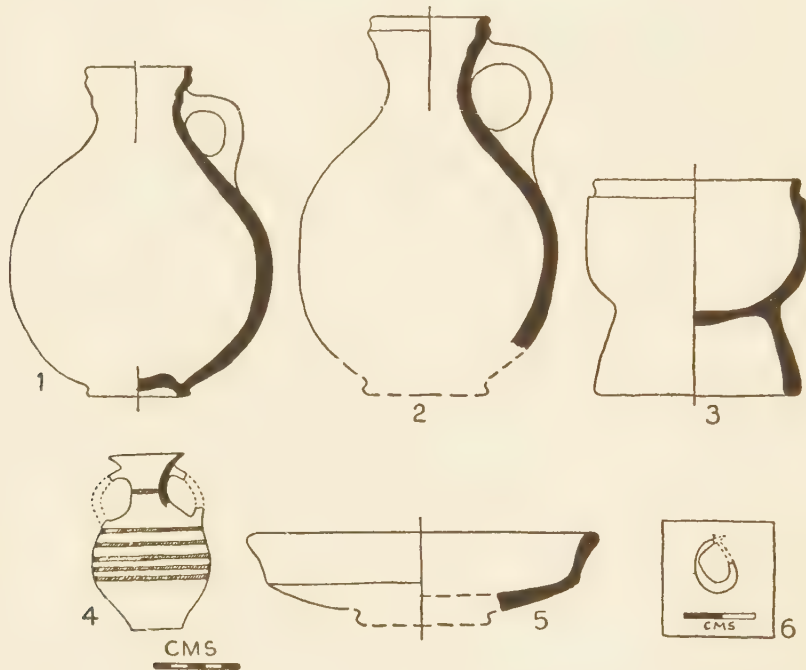


FIG 11. Objects Nos. 1-5 from Burial xi *b*; No. 6. from Burial xi *a*.

Burial xi *b*, Pl. XXXVIII, 2: also incinerated, but deeper than xi *a*; apparently head east; also a child (Cf. p. 127, note).

Objects, Fig. 11, Nos. 1-5, found in a group above the skull as follows:

- 1, bottle; nearly complete, rough red ware.
- 2, another; foot entirely missing; of similar ware.
- 3, goblet; almost complete; similar ware.
- 4, amphoriskos; gritty buff ware; obscured by a deposit of lime or ash, but showing

¹ This type occurred at Tell el Fāri'a in tombs of the cemetery which included the urn-burials, Petrie, *Beth-Pelet*, Vol. I, Pl. XLII.

EXCAVATIONS AT PILGRIMS' CASTLE, 'ATLIT (1933)

faint traces of painting in a dark colour, like the amphora with burial vii, Fig. 8, p. 144.¹

5, bowl; rough red ware.

Burial xi c was distinguished as another infant burial like xi a; though near xi b, it lay in a separate patch of cindery sand.

Burial xii.

Incinerated; the skeleton appeared to have been contracted but its remains extended for 1 m. 30 cm.; head south-east.

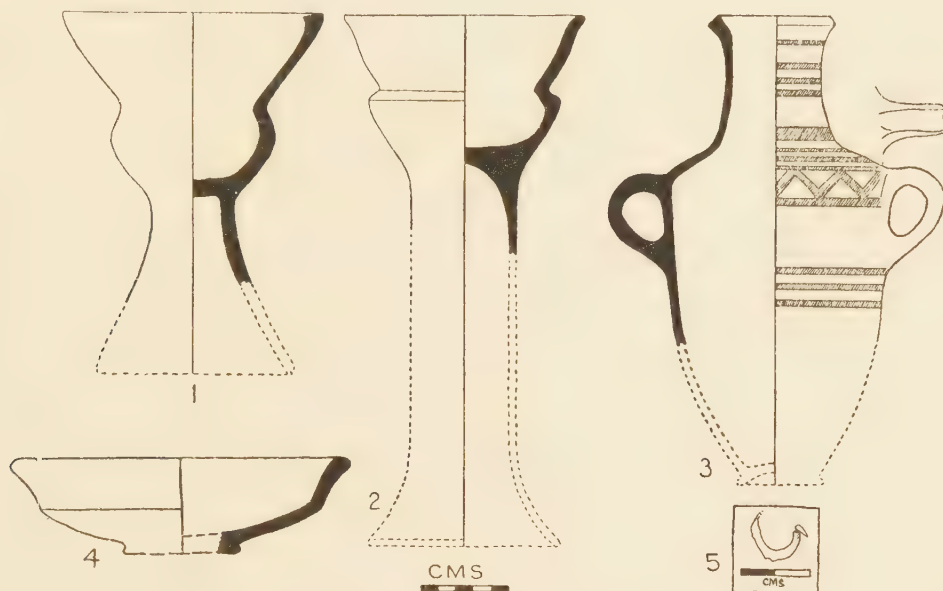


FIG. 12. Objects from Burial xii.

Objects, Fig. 12:

- 1, west of feet towards burial x; vase of coarse reddish ware with white grits; perhaps a brazier.²
- 2, on right of body; another, probably of similar ware, but blackened and reduced by fire.
- 3, beside skull; fragmentary amphora similar to that found with burial vii (*q.v.*) but much damaged and discoloured by fire.
- 4, east of head; fragmentary bowl, coarse buff ware.

¹ The form suggests a mixture of the Cypro-Geometric lentoid flask, *Swedish Cyprus Expedition*, Vol. II, Pl. CII, 2; CIII, 11, and later handle-ridge amphoriskoi, *ibid.*, CVI, 10, its decoration resembling the latter, which, in tombs at Amathus and Styli, belong to the transition from 'Cypro-Geometric III' to 'Cypro-Archaic I', i.e. the 7th century B.C.

² Cf. J. G. Duncan, *Corpus of Palestinian Pottery*, type 17.

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5, east of head; bronze ear-ring, one end broken, the other bent back.

Also, above the burial were scattered sherds of an amphora of the type found with burial v, Fig. 7, No. 2.

Burials xiii, a and b.

Both incinerated; burial xiii *a* was like xi *a*, that of a small child, without any objects; xiii *b* was indicated by pottery lying at a lower level across the patch of cindery sand marking the site of the burial, and by vestiges of a skull towards the eastern edge.

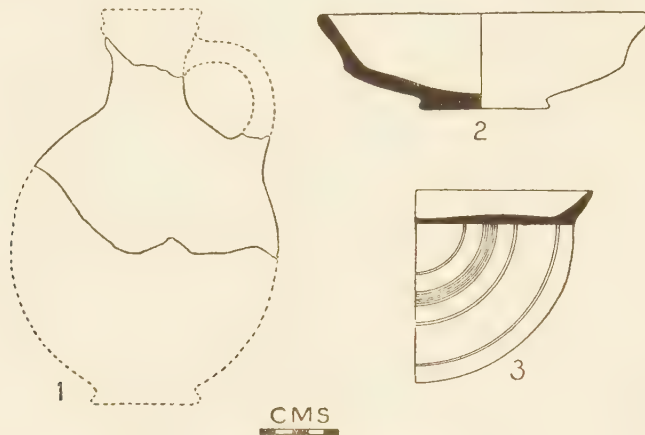


FIG. 13. Objects from Burial xiii *b*.

Objects with burial xiii *b*, Fig. 13.

- 1, beside the head: part of bottle, rough red ware.
- 2, scattered, presumably beside site of body: fragments of bowl, coarse buff ware.
- 3, also scattered, and in one instance cemented to a sherd of (2) with lime: fragments of a saucer, mostly damaged and discoloured by fire but evidently of the same ware and finish as that found with burial x, *q.v.*, p. 144; in addition it had concentric thumb-grooves underneath.

West of the head was found part of a silver ear-ring of the 'leech' type, as Fig. 15, p. 150, and also fragments of a bronze ornament, which may have belonged to either (*a*) or (*b*).

Burial xiv.

Pl. XXXIX, 1: incinerated; extended, head south.

Objects with burial xiv.

- 1, from behind back, opposite position of shoulders: Scarab; light yellow steatite; base deeply incised, Fig. 14 and Pl. XXXIX, 2. 'Above is the Solar disc

EXCAVATIONS AT PILGRIMS' CASTLE, 'ATLĪT (1933)

with wings and uraei and a horizontal line. In the centre is [𓂏] [𓂏] *Rc-hpr* (*Ra-kheper*). Sheshonk IV (?). The first sign is corrupt. On either side of the name [𓂏 𓂏] are the sacred eye [𓂏] and crown of Lower Egypt [𓂏]. Below all is [𓂏] *nb* (*neb*) 'lord'. A rope pattern encloses the signs.¹
2, from near the head: a carnelian barrel bead.



3, scattered over the remains of the cremation were a few odd sherds belonging to

(a) an oenochoe, with burnished red slip, as Fig. 6, No. 1, p. 142.

(b) a bowl, of similar ware, as Fig. 8, No. 2, p. 144.

(c) a long jar, as Fig. 7, No. 2, p. 143.



These sherds would hardly be sufficient to establish those types as types associated with the burial, unless the burial had been disturbed. That some interference did take place is suggested by the separation of the scarab and bead, possibly the relics of a necklace that might have been worth stealing.



CMS



FIG. 14.
Burial xiv.

Burial xv.

The partly incinerated remains of a small child, probably the leg bones, were found *in situ*, lying east-west. The bones were bleached and hard, as with the other incinerated burials, but the patch of sand where they lay was merely reddened, without any trace of charcoal. In this case the fire must have burnt itself completely out before the burial was covered up.

Burials xvi, a and b.

These two burials, both incinerated, lay in a practically continuous patch of blackened sand. Of burial xvi *a* only the upper part of the skeleton could be traced, extending for about 60 cm., head east; but from its position in the charcoal patch marking the site of the fire, the rest of the body must have been flexed.

¹ Extract from Alan Rowe, *Catalogue of Egyptian Scarabs, etc., in the Palestine Archaeological Museum*, See No. 865, p. 203, and cf. S. 100, p. 263. The author favours the view of H. Gauthier, *Le Livre des Rois*, Vol. III, Cairo, 1914, p. 375, and of H. R. Hall, *Catalogue of Egyptian Scarabs, British Museum*, Vol. I, London, 1913, pp. 246-7, in attributing the name 'Ra-kheper' to Sheshonk IV (763-725 B.C.), rather than to Osorkhon III (780-50 B.C.) as proposed by Flinders Petrie, *Scarabs and Cylinders*, London, 1917, Pl. LI, 23. 2, 3, &c. A scarab of similar style, and probably of about the same date, was found in the cemetery at Tell el Fāri'a which included the urn-burials, Flinders Petrie, *Beth-Pelet*, Vol. I, No. 531, Pl. XLIII; provenance '200', which, Sir Flinders Petrie informs me, denotes the cemetery in general.

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From the skull: fragment of bronze ear-ring, 'leech' shape as Fig. 15 below; bronze granule, possibly part of the same.

Burial xvi *b* must have been entirely consumed and could be distinguished only by a pair of ear-rings found 15 cm. apart towards the east edge of the patch of blackened sand, at least 40 cm. south of the skull of burial xvi *a*.

Fig. 15, objects assigned to xvi, *b*.

1, silver ear-ring.

2, bronze ear-ring, with traces of silver-plating.

3, with (2): bronze-wire ring, fragmentary.

Also, at 50-60 cm. to the west of these was: an iron fragment, possibly part of a knife; a piece of bronze wire, some bronze granules, &c.

Scattered over both burials were sherds of: an oenochoe; fine reddish body, with glossy haematite-red slip, burnished as Fig. 6, No. 1, p. 142; some more sherds of which many remain under the medieval wall which still partly covers the patch of blackened sand around burial xvi *a*.

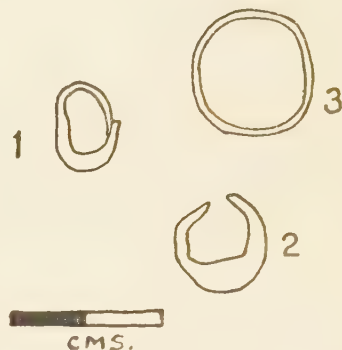


FIG. 15. Burial xvi *b*.

Burials xvii, a, b, c.

Pl. XXXIX, 3. Of these three burials, xvii *a* and *b* were incinerated burials like the majority; xvii *a* lay higher but was partly covered by the medieval wall limiting the area of excavation; xvii *b* lay 20 cm. lower but wholly within the area; while xvii *c*, the unique urn-burial, must have been inserted beside xvii *b* from the higher level corresponding to xvii *a*.

Burial xvii *a* was only partly exposed; scanty remains of the skeleton were found, but could not be identified; at the same level were scattered sherds, which also covered the top of the cindery sand over burial xvii *b*, belonging chiefly to types of Fig. 7, No. 2, p. 142, and Fig. 9, p. 144 above, and Fig. 16, p. 150, below.

Burial xvii *b* was represented by a few small scraps of bone in a separate patch of very black sand, 20 cm. lower, Pl. XXXIX, 3.

Objects with xvii *b*, Fig. 16:

1, found among the sherds above, but in black sand directly covering the burial: iron knife, cf. Pl. XXXIX, 4; tang riveted for covering of bone or wood; tip of recurved, Sicilian type.¹

3, near knife, at same level: saucer, rough red ware.

7, also at that level: pendant, bronze, which possibly owes its preservation to

¹ Flinders Petrie, *Tools and Weapons*, London, 1917, paragraph 63, p. 25; p. 65; cf. Pl. XXVI, 130-147, especially 139 (*L'Anthropologie*, Paris, 1890, Pl. I, fig. 7, probably from Egypt), and 140, from Troy, for tip; 147, from Crete, for handle.

EXCAVATIONS AT PILGRIMS' CASTLE, 'ATLĪT (1933)

silver-plating; corrugated vertically like a nut; hanging on a loose bronze ring, to which the severed link of a chain is still attached, also of bronze.¹

8, also at that level, but probably belonging to another burial to the south-east, cf. Pl. XXXIX, 1: juglet, rough red ware.

The remaining objects illustrated in Fig. 16 were found level with the remains of burial xvii b:

2, underneath (3) at centre, Pl. XXXIX, 3: saucer, as (3).

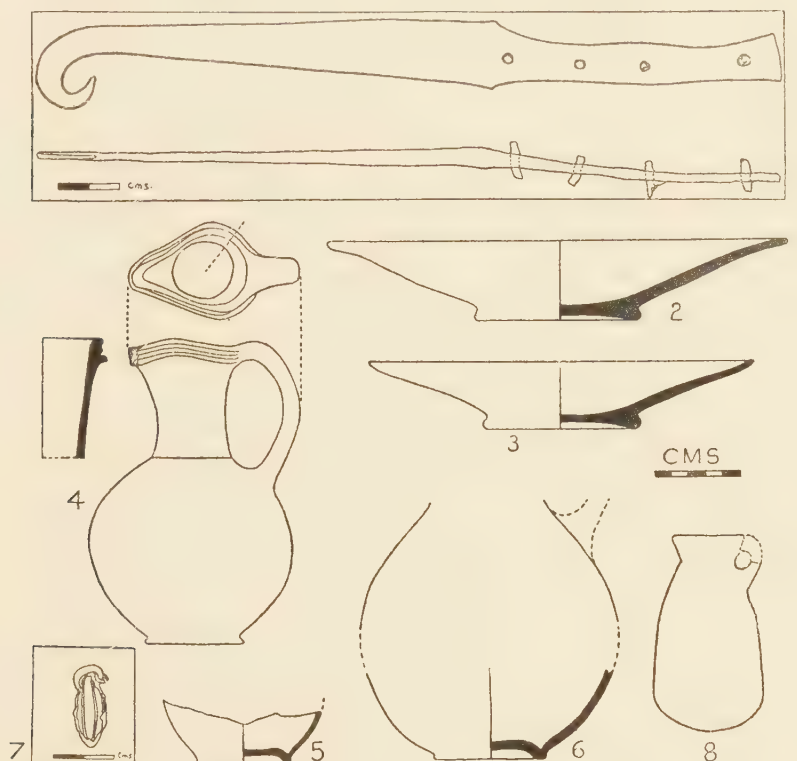


FIG. 16. Objects Nos. 1-7 from Burial xvii b; No. 8 Unassociated.

4, at west, Pl. XXXIX, 3: jug, practically complete; gritty buff ware, heavily encrusted with a deposit of lime which obscured the original finish.²

5, at centre, Pl. XXXIX, 3; part of bottle or jug, possibly as (4); gritty buff ware, rough.

6, at south, Pl. XXXIX, 3: part of another; similar ware.

¹ Cf. the acorns and berries of eastern Greek jewellery from Ephesus and Rhodes, and of early Italian jewellery, Etruscan and Phoenician, *Catalogue of Jewellery, British Museum*, Pls. IX-XI, XXI-XXXIII; 8th century B.C. onwards.

² Closely resembling a jug of plain, unpainted ware from Stratum 5 at Jericho, cf. E. Sellin—C. Watzinger, *Jericho*, Pl. 34, A. 21, and p. 138.

Also, from the east edge of the charcoal patch belonging to xvii *b*, came:

Fig. 17: two loops of bronze wire, the one threaded through the other; possibly a pair of poorly made tweezers, broken and deformed,¹ or a wire hinge.

Fig. 18: part of a bronze pin (?), cast to shape.

Burial xvii *c* was contained in an amphora, covered with an inverted saucer, both of rough red ware coated with a grey deposit of lime, Fig. 19 and Pl. XXXIX, 3.²

The amphora was more than half filled with the residue of the cremation, a conglomerate of ashen grey sand and scraps of partly calcined bone.³

Burial xviii.

Incinerated; apparently head east; probably a child. At the skull was part of a bronze ornament, possibly a decayed earring, and two opaque glass beads, one circular of white glass, the other barrel-shaped of dark-blue glass. A few sherds of burnished, red-slip ware were found in the cindery sand marking the burial, and others may remain under the medieval enclosure wall which formed the limit of the excavation.



FIG. 17. Burial xvii *b*.

FIG. 18. Burial xvii *b*.

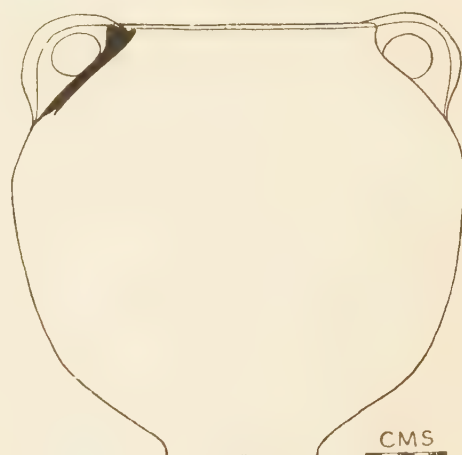


FIG. 19. Burial xvii *c*.

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¹ Cf. Flinders Petrie, *Tools and Weapons*, Y 15 &c., Pl. LXII; Y 36 &c., Pl. LXIV.

² As noted on pp. 132-4 above, the amphora is typical of jars used as urns at Tell el Fāri'a and Tell el 'Ajjūl, cf. *Corpus of Palestinian Pottery*, 33 D 2, 44 W 3, 45 K 1, especially.

³ The Deputy Director of Medical Services notes: 'Sand and small particles of bone, the Haversian canals of which are recognizable under a lens of low magnification.'

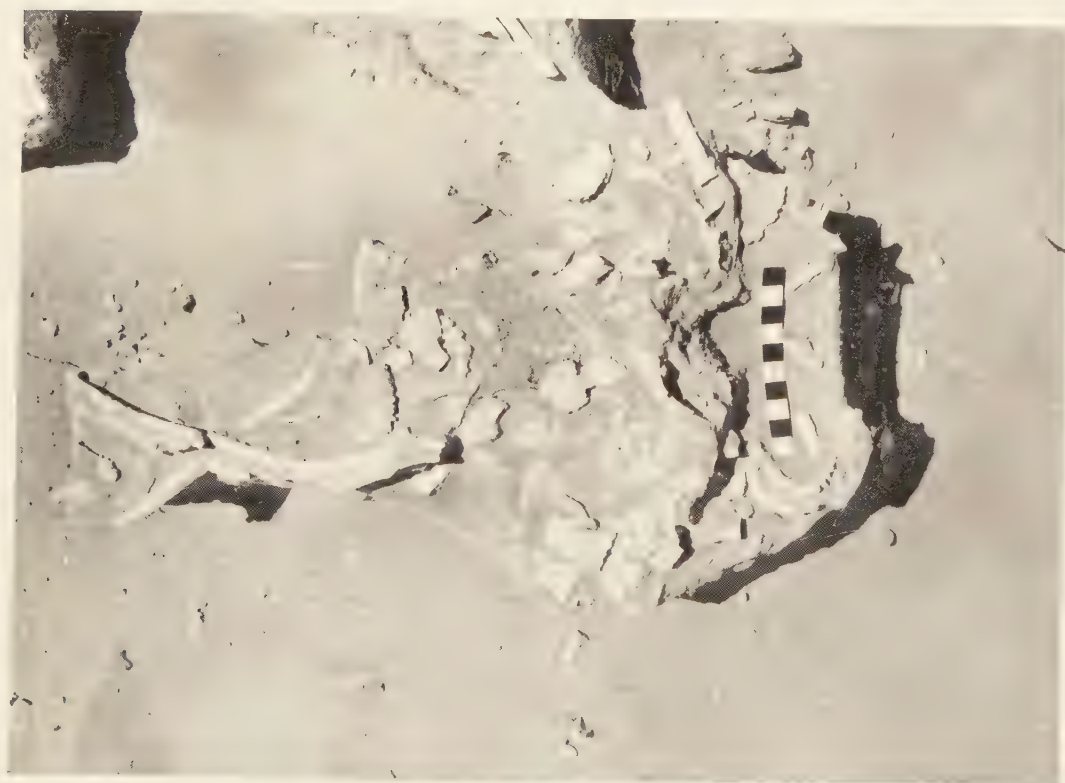


THE BURIAL-GROUND IN R-18. 1, LOOKING NORTH; CRUSADER WELL-HEAD AT LEFT,
ENCLOSURE WALLS AT CENTRE AND RIGHT; WALL AT RIGHT RETAINING SURVIVING
PORTION OF PRE-CRUSADER TELL, cf. FIG. 1, p. 123
CREMATED BURIALS, 'ATLIT

NORTH



1. VERTICAL VIEW OF BURIAL I, p. 159

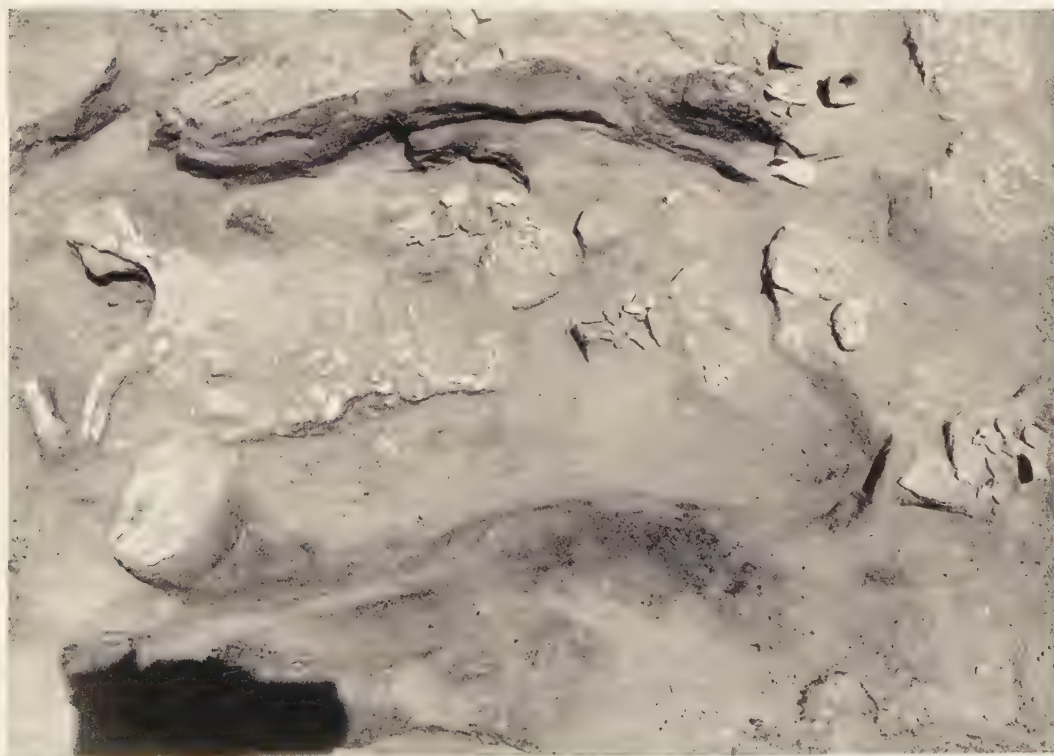


2. DETAIL OF SKULL, ETC., *IN SITU*, BURIAL I
CREMATED BURIALS, 'ATLIT



1. VERTICAL VIEW OF BURIAL V; PAINTED BOTTLE AT RIGHT; AMPHORA TOWARDS CENTRE; SHERDS OF AMPHORA COVERING BURIAL VI AT LEFT, p. 143

NORTH-EAST



2. VERTICAL VIEW OF BURIAL VII; SHERDS OF PAINTED AMPHORA, ETC., AT RIGHT, p. 144
CREMATED BURIALS, 'ATLIT'



1. VERTICAL VIEW OF BURIAL VIII, LOWER PART ONLY, p. 145

NORTH



2. VERTICAL VIEW OF BURIAL XI *b*; BEFORE REMOVING DEPOSIT OF POTTERY ABOVE SKULL, pp. 146-7

CREMATED BURIALS, 'ATLIT



1. OBLIQUE VIEW OF BURIAL XIV, LOOKING EAST; POSITION OF SCARAB SHOWN BY ARROWS, pp. 148-9



2. SCARAB, BURIAL XIV, p. 148 and FIG. 14



3. VERTICAL VIEW OF BURIAL XVII *b*, WITH POTTERY *IN SITU*; URN-BURIAL XVII *c* AT TOP OF ROD; PART OF XVII *a* OPPOSITE, pp. 150-2



4. IRON KNIFE, BURIAL XVII *b*, p. 150 and FIG. 16

CREMATED BURIALS, 'ATLIT

NOTE ON RECENT DISCOVERIES OUTSIDE ST. STEPHEN'S GATE, JERUSALEM

1. *Late Roman Tomb*

DURING the winter of 1935-6 the road leading from the east gate of Jerusalem, Bāb el Asbāt, or St. Stephen's Gate, to the Jericho road was

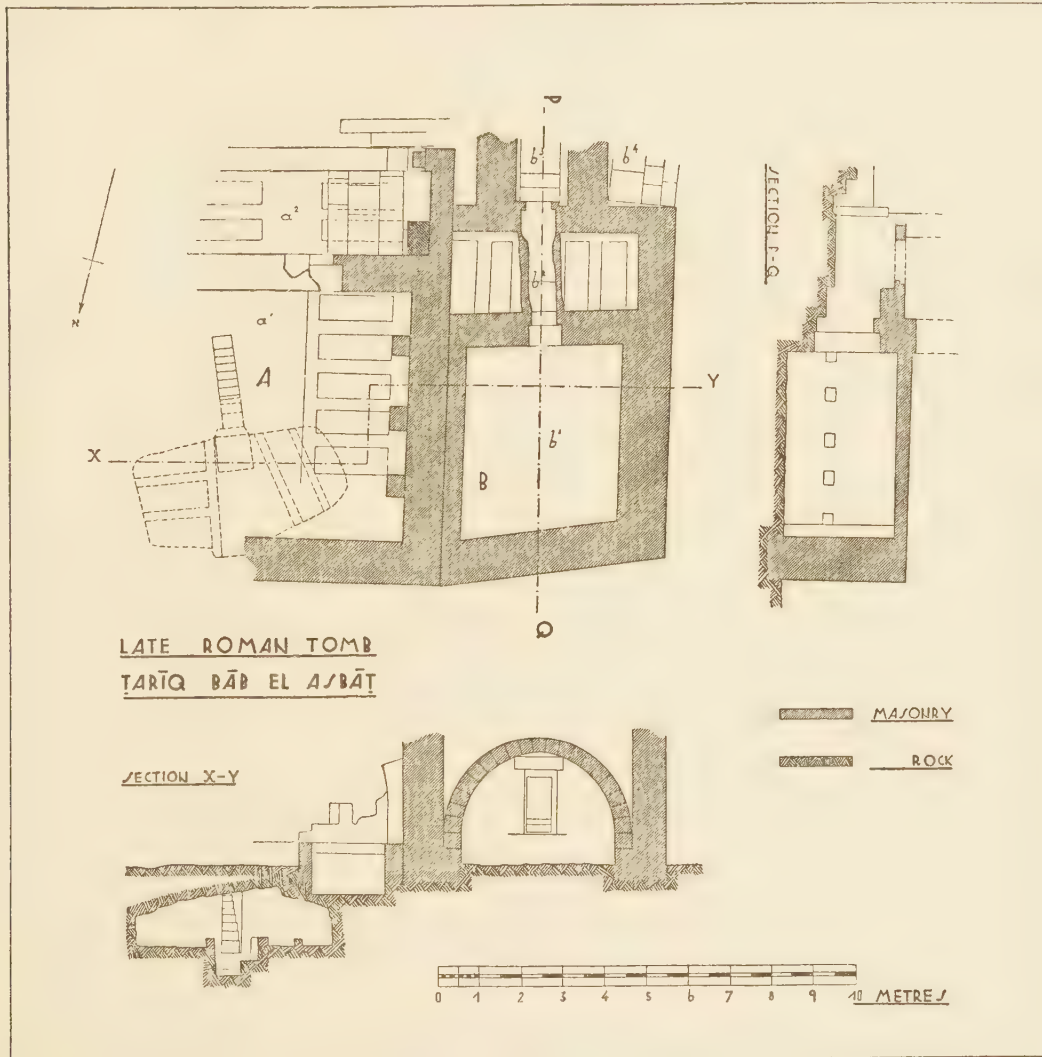


FIG. 1

reconstructed. The necessary excavation revealed near the junction of the two roads the remains of a masonry tomb of late Roman date (Pl. XL, 1). A plan and cross-sections of the tomb are shown on Fig. 1.

The whole consists of two distinct but adjacent structures, *A* and *B* (Fig. 1). *A*, of which the eastern part was destroyed when the Jericho road was built, was originally composed of a rectangular chamber, *a*¹, roofed by means of transverse arches resting on wall piers, and entered from the south through a colonnaded porch, *a*². Three steps, of which the uppermost carried a colonnade, led up to this porch from the south. A moulded respond base (Pl. XL, 2) and one stone of the stylobate remain. The porch was paved with stone slabs beneath which were two pairs of rectangular graves, orientated east and west (Fig. 1).

A door in the north and inner wall of the porch gave access to *a*¹, the main tomb chamber. The lower part of the western jamb is all that remains of this door. The floor of *a*¹ has entirely disappeared, disclosing beneath it a row of five parallel rectangular graves, ranged along the western wall of the chamber. Like all other graves in both sections of the monument these were sealed by heavy cover-stones resting on the partition walls between them and, at the end of the row, on a ledge left projecting from the wall of the chamber. The partitions, some 30 cm. thick, were of rubble, rendered in plaster. The graves, here and throughout the monument, measure about 1.75 m. × 0.50 m. on plan, and 1.00 in depth; they are orientated sometimes north and south, sometimes east and west.

From about the middle of *a*¹ a flight of 11 steps leads down to a natural subterranean cave, the floor of which has been roughly hewn to form five shallow graves and a sunk space in the centre.

Embedded in the rough masonry forming the north wall of *a*¹ was found the fragment of the 'θάνατος' inscription published on pp. 1 ff.

The western part of the tomb, designated *B* on the plan, was of rather different construction and plan.

*b*³ is a flight of two stone steps leading downwards from the south, between two flanking walls, to a doorway from which a stone-roofed passage, *b*², gave access through an inner doorway to an ashlar vaulted chamber, *b*¹. The area in front of the tomb, *b*⁴, had a stone pavement.

On either side of the passage, *b*², and screened from it by rough partition walls, were two pairs of graves similar to those in *A*, and, like them, covered by stone slabs.

The vault of *b*¹ was constructed throughout of well-dressed and coursed limestone blocks (Pl. XLI, 2). The rock floor which contained neither graves nor burials was some 70 cm. below the cill of the doorway. The end walls of the vault were of rubble rendered in a rough concrete. Five rectangular apertures were left in the third course above the springing in either long side

DISCOVERIES OUTSIDE ST. STEPHEN'S GATE, JERUSALEM

of the vault. Possibly the purpose of these was to take the ends of horizontal timbers supporting the centering used at the construction of the vault.

The whole of *B* as it stands formed the basement of a higher structure that has now disappeared except for a part of the stone pavement of an upper room occupying the area above *b*² and the adjoining graves.

The contents of the graves throughout *A* and *B* were similar and of no great interest. They consist in lamps of fourth-century form¹ and a few pieces of glass (Pl. XLII).

2. *Inscribed Funerary Slab*

About half-way between the tomb just described and the city gate, labourers of the municipality found the inscribed stone slab shown on Pl. XL, 3.

The inscription is in four lines of extremely crude and irregular lettering. The height of the letters varies from 10 to 4 cm. and the spacing is no less inconsistent. The inscription reads:

* θικη Διαφ
ερουσα Αμος
Διακονου τις π
ροβατισκis

Private tomb of Amos, deacon of the Probatike.

Both spelling and stone-cutting show the characteristic defects of cheap inscriptions of the late Byzantine period, notably the use of ι for η and the great irregularity in the size of the letters which tend to get individually larger but collectively more cramped as the inscription proceeds. They call for no special comment. A diminutive sigma has been inserted by an error of the stone-cutter in the last word of the inscription.

The Church of the Probatike, or Pool of Bethesda, to which Amos the owner of the tomb belonged, stood within what are now the precincts of the French Order of the African White Fathers, at St. Anne's, not 500 yards from the place where the inscription was found.² The church is first mentioned during the first half of the fifth century. The existence of a monastery in the immediate neighbourhood during the Byzantine period is probable, but is first mentioned only by Anastasius the Armenian, writing after the Moslem Conquest. An early tradition associated the neighbourhood of the

¹ Cf. *QDAP*, III, pp. 84-7; *ib.*, IV, p. 177 and Pl. LXXXVI; *ib.*, V, p. 54 f., Pls. V-VIII.

² For a comprehensive account of the history and archaeology of the two sanctuaries now comprised in the establishment of the White Fathers at St. Anne's, see P.P.L.-H. Vincent et F.-M. Abel, *Jérusalem Nouvelle*, Tome 4, pp. 669-742.

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miraculous pool with the birth of the Virgin Mary, but the association does not receive explicit mention till the sixth century. The Semitic name Amos, in Greek Ἀμός or Ἀμῶς, with genitive Ἀμός, Ἀμοῦ, or Ἀμῶτος, occurs not infrequently in Byzantine Papyri and on inscriptions of the Byzantine period from Syria.¹ The present inscription would seem to date not earlier than the sixth or seventh century.

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¹ Preisigke, *Namenbuch*, s.v.v. Ἀμός and Ἀμῶς; *Publications of Princeton University Expedition to Syria*, III, Section A, Nos. 135, 141, 145, 786⁵, &c.

S C

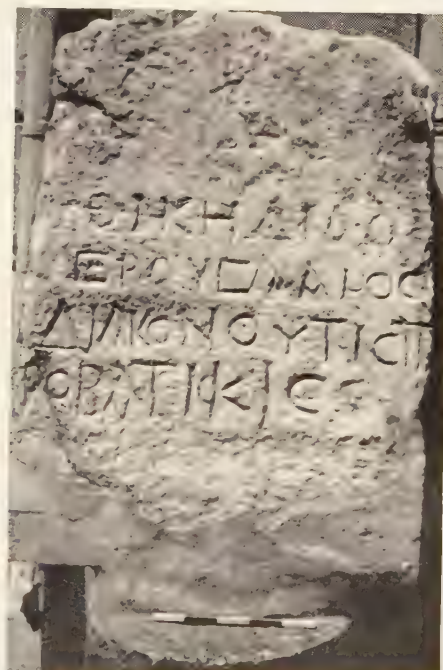
D.C.B.
N.A.



1. General view of the excavations, looking west.



2. Moulded respond base.



3. Funerary slab of the deacon Amos.

DISCOVERIES OUTSIDE ST. STEPHEN'S GATE, JERUSALEM



1. Late Roman pool, looking south.



2. Vault (b¹ on plan), looking south.

DISCOVERIES OUTSIDE ST. STEPHEN'S GATE, JERUSALEM



LAMPS AND GLASS FOUND IN A LATE ROMAN TOMB OUTSIDE ST. STEPHEN'S GATE, JERUSALEM

EXCAVATIONS AT KHIRBET EL MEFJER. II¹

EXCAVATIONS at Khirbet el Mefjer were resumed on 4 December 1935, and work was suspended at the end of March 1936. The nature of the construction under excavation became apparent. It consisted of an approximately square cloistered court, surrounded by separate blocks of buildings on the four sides, and orientated east-west. The main entrance was on the east side, dividing that block of building into two parts.

The area excavated during this season included the Gateway and Entrance Hall, the four cloisters, the West Block of buildings, including the subterranean Vaulted Hall, and the North Block (Fig. 1, Plan).

The Gateway. The Gateway is flanked by two benches (Pl. XLIII, 1 and 2) each of which has three head- or arm-rests, one (in section a quarter circle) at each end, and one (semicircular in section) in the middle. Four courses above the bench a band, 27 cm. high, with cyma recta moulding, and capped by a fillet, ran right round the walls of the Gateway. The band was decorated with conventionalized anthemions and leaves, the stalks of which interlaced (Pls. XLIII, 2 and XLIV, 2). Over this band, on both sides of the Gateway, there were three semicircular niches, each separated from the other by a pair of small engaged columns, resting on decorated bases (Pl. XLIV, 1), while a single column was placed at the outer flank of the end niches. Though the upper parts of the existing niches are no longer in place, a number of niche heads decorated with various designs in relief, such as vines growing out of cornucopiae (Pl. XLIV, 3), anthemions, and other floral and geometrical designs (Pl. XLIV, 4), which will be described more fully in the final publication, were found lying in the debris both in the Gateway and just outside it. The diameter of the most complete one found so far is the same as that of the niches (76 cm.).

A second series of stones, with cyma recta moulding, were also found in the debris of the Gateway. Three leaves running round a rosette are carved in high relief out of the stone (Pl. XLV, 1). In order to bring out the decoration better, the background is painted red, leaving the three leaves and the rosette in the natural colour of the stone. These stones may have possibly formed a cornice above the niches. The carving in high relief and the emphasis given by the coloured background point to a high position in the building.

A number of voussoirs, the soffits of which are so moulded as to form a multifoil vault, were found in large quantities in and around the Gateway (Pl. XLV, 3-4), each foil being separated from its neighbour by a torus

¹ Cf. *QDAP*, V, pp. 132-8.

moulding of slight projection. In a few of the voussoirs the torus moulding is continued up the face of the voussoir and develops into a fluted column with a Corinthian Capital (Pl. XLV, 4). It is thus evident that the Gateway was provided with a multifoil barrel vault, and that in elevation its outer voussoirs were decorated with a series of columns radiating from the centre of the arch.

The floor of the Gateway was paved with bituminous limestone flags, laid parallel to the walls. There are two steps, one on the east with a tread 1.03 m. long, and another on the west in front of the door, having a tread 1.10 m. long. One of the stones built in the south wall has a few marks made by dividers, showing an intention of decoration, which was abandoned later.

The door has a raised limestone threshold. The outer faces of the jambs (or architrave) are splayed slightly inwards. They are decorated in low relief with various rosettes enclosed in squares set diagonally. These squares are enclosed in larger squares surrounded by a guilloche border and set normally. The triangular spaces between the squares are decorated with floral designs (Pl. XLV, 2). Immediately inside the door a lintel in three sections was found (Pl. XLVI, 1). The two lateral sections were joggled on their inner ends to fit a hexagonal centre stone. The lower half of these sections was decorated in the same technique and with the same *motifs* as the rest of the architrave already described of which it forms the horizontal continuation. The upper half is left plain.

In the debris, in this area, several voussoirs were discovered (Pl. XLVI, 2), decorated with floral designs, enclosed between columns capped by lotuses, and arched. They appear to have formed rosettes that were part of the decoration of the entrance.

The Entrance Hall. The door led into the Entrance Hall (Pl. XLVII). There were two benches on each side of this Hall, separated from each other, and flanked on each side, by clusters of engaged columns (Pl. XLVIII). Each bench had originally three head-rests similar in section and arrangement to those found in the Gateway. Plaster, 4 cm. thick, was spread over the columns (which are of sandstone) and over the north and south walls of the hall which were between the columns, and carved. The plaster on the column shafts was alternately carved to give the effect of spiral fluting, or treated vertically in low relief. A row of 'pearls' was carved at the bottom (and probably at the top) of each shaft (Pls. XLVIII–XLIX). The plaster on the walls was decorated with human, animal, floral, and geometric patterns, in a style that is reminiscent for the most part of Sassanian and Hellenic-Syrian

EXCAVATIONS AT KHIRBET EL MEFJER. II

rather than of Byzantine Art.¹ Unfortunately only a small proportion of the plaster was found *in situ*. The bulk of the plaster was found mixed with the debris, from which it had to be extricated with great care. Such as was left, however, was enough to show its importance.

The plaster on the south wall, between the second and third clusters of columns, is illustrated in Pls. L, 1 and XLVIII. It consists of three panels, the upper part of which is entirely gone. The first panel has a border consisting of a series of circles, each containing a rosette, followed by a row of 'pearls' and a second interlacing border. The field is decorated with three-lobed leaves enclosed in sunk cross-shaped panels. In the central panel the interlacing border is replaced by a narrower scale border, along the sides only. In the middle of the field there is half a rosette, from which seven leaves radiate. A vine carrying leaves and bunches of grapes grows to the left of it. In the third panel the border of the first panel is repeated. The decoration in the field consists of rosettes set in a zigzag pattern.

Of the plaster on the north wall, between the second and third clusters of columns, only one panel remains. It is illustrated in Pls. L, 2 and XLIX, 1. The outer border resembles the outer border of the plaster on the opposite wall except that there is in addition a partly finished row of 'pearls' outside the border of circles. The interlacing border here is narrower and slightly different. The field is decorated by swastikas and a series of three leaves spreading from a point in the middle.²

The stucco behind the head-rests was found to be carved, showing that the head-rests were placed after the carving.

The rest of the plaster that was found in the debris (Pls. LI-LII) will be worked upon, and an attempt will be made at reconstructing the original designs by piecing together what is left of them. The results will appear in the final publication.

The floor of this Hall is paved with flags of bituminous limestone, and is separated from the East Cloister by a raised step, near the east cluster of columns. The benches seem to have been roofed over with side arches built of baked bricks (Pl. LIII, 1). They probably carried a barrel vault over the Entrance Hall, an arrangement which is found in the Subterranean Vaulted Hall below Hall I.³

¹ Cf. Oscar Reuther, *Die Ausgrabungen der deutschen Ktesiphon-Expedition im Winter 1928-9*, Figs. 14, 15, and 19; id., *Die Ausgrabungen der zweiten Ktesiphon-Expedition, 1931-2*, Figs. 23, 25, 31, and p. 34.

² Cf. p. 157. Captain K. A. C. Creswell, who saw these, said that they were a frequent *motif* of the Umayyad period.

³ Cf. *QDAP*, Vol. V, p. 137. The Hall could not possibly have been roofed as at Qaşr

The Cloisters. The Entrance Hall opens on to the East Cloister, and so to the Central Court, which is nearly square in plan, being 28.95 m. long and 27.73 m. wide.¹ It is separated from the Cloisters by a raised step on each side carrying four columns, each 3.05 m. long and 44 cm. in diameter, while at each corner there is an L-shaped pier with two pilasters, one at each end. These piers, together with the four columns which flank the Court on each side, carried five arches on each side of the Court. The Court and the Cloisters are paved with the same kind of flagstones as the Gateway and the Entrance Hall.

In the Court, at a distance of 1.08 m. from the East Cloister, there is a drain, which starts in front of the north-east and the south-east piers, and runs parallel to the East Cloister sloping towards the middle, and thence it turns east, running out below the Entrance Hall and the Gateway. There is a shallow groove 17 cm. wide and 2 cm. deep in the pavement over the drain which is interrupted by small sumps cut in the pavement in five places, of which only two exist, and which communicates with the underground drain by trefoil holes (Pl. LIII, 2-3).

The East Cloister extended from the outer wall on the south to the outer wall on the north. In the northern extension a stairway starting east of the North Block (Pl. LIV, 1) runs along the west side, and north end of the extension, carried by two arches on the west and one on the north, and ends on the east side in a landing which is supported by a half arch and two round arches; the piers from which these arches spring are still *in situ* (see Fig. 1).

Most of the flagstones of the pavement have been removed, and the fallen columns, including one of the bases, have been badly disturbed (Pl. LIV, 2). The original positions of the columns are shown by the square blocks in limestone, on which the bases originally rested, and which are still in position. In the southern extension there were no stairs corresponding to those in the northern extension. Pottery pipes were found placed vertically in the middle of the wall at each end of the cloister. Further excavation will perhaps help to trace their course and ascertain their use.

The West Cloister is symmetrical with the East Cloister. In the southern extension a stairway, starting west of the South Block, runs along the east side and south end of the extension (Pl. LV, 1). The stair is carried by a

Kharrāneh in Trans-Jordan, cf. Jaussen et Savignac: *Mission Archéologique en Arabie*, Vol. III, Pl. XXVI, 3 and Pl. XXXIV, 1, because the clusters of columns in the middle are not opposite each other.

¹ These are the mean measurements N.-S. and E.-W. respectively. Actually every side is different (Fig. 1).

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round arch on each side, and ends in a landing on the west side, supported by four arches the piers of which are still extant.

The Cloister was interrupted, about the middle, by the Sunk Court excavated during the first season,¹ which leads into the Subterranean Vaulted Hall.² In the northern extension a broad flight of steps, stretching across the whole width of the Cloister, leads up to a small door that has subsequently been blocked up. This door originally communicated with the street outside, which separated the building under discussion from the settlement on the north.³ It was possibly the service door.

The pavement of this Cloister has suffered less disturbance than that of the East Cloister. A few flagstones have disappeared in the south end of the Cloister and immediately north of the Sunk Court. The columns are still lying where they fell (Pl. LV, 2). The second, third, and fourth bases from the south have been only slightly displaced, probably due to the impact of the fallen columns on the floor. The first base was kicked by the fallen column (which was found lying partly on the block that carried the base) into the Subterranean Vaulted Hall, where it was found.

The North and South Cloisters are symmetrical, and it is sufficient to describe only one of them. They do not, like the East and West Cloisters, extend as far as the outer walls, being curtailed at both extremities by the East and West Blocks.

The pavement in the east third of the North Cloister is entirely missing, while the rest is in a good state of preservation. The four columns have not suffered further disturbance after falling from their original position, but one of the bases, on the east side, was not found in place (Pl. LVI, 1).

Two responds project from the east and west ends of the south wall of the North Block, and two corresponding responds project from the north-east and north-west piers, to carry the arches which supported the timber roof.

The South Cloister is identical with the North in plan; also it suffered damage to the same extent. The looters seem to have concentrated their efforts on the pavement in the east part of the court.

The corner piers of the Cloisters are all alike, and it will be sufficient for the purpose of this report to describe one of them, and later point out differences in details where such exist.

Each pier is L-shaped, and one respond and two pilasters project from it, one pilaster at the end of each arm, and the respond from the side opposite

¹ *QDAP*, Vol. V, p. 136.

² Called 'Crypt' in the first report, before the nature of the building became apparent.

³ *QDAP*, Vol. V, p. 132.

the North or South Blocks, as the case may be. The two pilasters projecting from the arms have moulded bases, and correspond to the colonnades of the adjacent Cloisters (Pl. LVI, 2). In the case of the north-east pier there is a small square hollowed-out stone placed between the arms of the pier for collecting water, with a hole in the middle of the south side, for allowing the water to escape into the drain where not required (Pl. LVI, 3). This is not repeated in the case of any of the other piers. There were no responds projecting from any of the piers facing the East or West Blocks.

In addition to fragments of columns of white marble, of 26 cm. diameter, with corresponding capitals and bases (Pl. LVII, 1-2), many fragments of plaster screens, carved on both sides, were found in the South Cloister and the southern halves of the East and West Cloisters. These are similar to the screen found in one of the rooms of the West Block described below.

The West Block. The West Block of buildings is symmetrically planned on the axis of the unit, consisting of a central hall and four chambers excavated last season, and marked I and I (*a-d*) on the accompanying plan¹ (Fig. 1). It will thus be sufficient to describe the rooms and halls south of this unit, and then note any differences of detail between the two groups.

First, there were two rooms, communicating together by a door which has a high threshold (Room II (*a*) and (*b*) on Fig. 1), and opening on to the Cloister through a door in Room II (*a*). On the west wall of Room II (*a*), south of the door, an arch is outlined in red (Pl. LVII, 3).² Two plaster screens carved on both sides were found in fragments on the floor of this room. Below them were quantities of loose mural glass mosaics in various colours. The plaster screens are illustrated in Pls. LVIII-LIX. One of the screens had been completely finished, but the second had only been outlined. On comparing the two it is evident that they were intended to have the same design. If we take one side of the two screens (Pls. LVIII, 2 and LIX, 2) it will be found that each consists of a border of rosettes entwined by interlacing branches, leaves and tendrils. The field consists of a circular pattern, containing intertwining and interlacing geometrical designs including a five-pointed star and a five-lobed *motif*, containing on each of the sides three circular medallions, linked vertically, each enclosing an anthemion.³ The incomplete screen is fully outlined, and partially carved, and requires only detail carving. The reverse side (Pls. LVIII, 1 and LIX, 1) of the two

¹ Cf. *QDAP*, Vol. V, pp. 132 ff.

² This is absent in the corresponding Room (II' *a'*) to the north of Unit I.

³ Cf. Jaussen et Savignac, *Mission Archéologique en Arabie*, Vol. III, Pl. XXXII and Pl. XXXIV, 2.

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screens is decorated with a border of intertwining branches, forming circular *motifs* all round, in each of which there are three pods or leaves, each carrying two seeds in its fold. Bunches of grapes also sprout from the branches. This border surrounds a field decorated with sunk lozenges, which contain a four-petalled and an elongated six-petalled rosette alternately. In the incomplete screen the border is completely outlined and partially carved, but the detail is not finished. The field is marked with dividers ready for outlining and carving, only the outline of the lozenges having been marked.

The floor of these two rooms is paved with a thin coating of plaster. They appear to have been used as work-rooms during the period of construction. The finding of the complete side by side with the incomplete screen suggests that the artist was carving two screens to the same pattern, and had only finished one when he was interrupted.

These two rooms are followed by a unit consisting of two rooms (III (a) and (b) on plan), and a large Hall (III on Fig. 1). Room III (a) opens on to the Cloister on the east, and gives access to Hall III by a door in its south wall, and to Room III (b) by a door in its west wall.

Hall III is spacious and approximately square, being 11.10 m. long and 11.00 m. wide. Originally it was intended to open on to the Cloister, but the arches carrying the landing of the second floor necessitated the blocking up of this door, and so the door leading into Room III (a) had to be opened. Two rectangular responds built against the middle of the north and south walls, and two approximately square piers, placed in the same line as the responds, divide the hall into two halves for the purpose of roofing. These carried an arcade (some of the voussoirs of which were found in the debris), which, with the east and west walls of the hall, supported two parallel barrel-vaults constructed of sun-dried bricks that were found disintegrated and lying over the floor.

The pavement of this unit is made of pinkish concrete similar to that used in Hall I and the adjoining rooms. The concrete was placed over a rough bedding of flat pebbles and mortar.

The essential difference in plan between this section of the West Block and that north of unit I, is that Hall III' retained the door opening on to the cloister, and there is no door between this Hall and Room III' (a'), there being no necessity for it.

Further, the floors of all the rooms and the Hall in this section were either not finished, as in Rooms II' (a') and (b') and III' (a') and (b'), where only the pebble and mortar bedding was laid, or not even started, as in Hall III'. It is of interest to note at this stage how the red ochre used for colouring the

concrete had been prepared in the south-east corner of Room III' (a'), but some occurrence had prevented it from being used.

Along the west and south walls of Hall III', near the south-west corner, roof-tiles were stacked and have remained there ever since (Pl. LX). Fragments of carved plaster screens, similar to those found in the Cloisters and Room II (a), were also found here in the debris, not lying on the floor.

Most of the masonry used in the West Block bears names, Christian as well as Moslem, in Arabic, painted in red, as well as masons' marks. Illustrations of these were published in the first report and a complete corpus will appear in the final publication.

The Subterranean Vaulted Hall. The Sunk Court excavated last season and described in the first report¹ opens through a door² into a barrel-vaulted hall below Hall I. The threshold is 25 cm. high outside. Inside it is three-stepped, the total height of the steps being 40 cm. Over the door there is a lintel, originally a single block, but now slightly broken, over which there is an arched window, which acts as a relieving arch.³ Inside the threshold there are two rectangular sockets for the hinges, and spaces are left at the top, behind the door-jambs, for a cross-beam. Below the threshold a pottery water-pipe was found, leading from the Sunk Court into the Vaulted Hall.

The vault rests on four side arches, two on each side. There is a straight joint between the vault and the east wall. The west wall has been faced with bricks, but the same arrangement was probably repeated there as well. At a distance of 7.5 m. from the east wall, a stepped plastered masonry partition (Pl. LXI, 1) divides the hall into two parts, each part containing two of the side arches. A plastered bench runs along the north and south sides of the east part, continuing into the area below the arches. The bench is covered with small tesserae⁴ forming various geometrical designs (Pl. LXI, 2) in red (three shades), brown, yellow, black, and white. Along the outer edge of the mosaics small marble slabs were placed to keep the pavement in place. All of these slabs have disappeared except the first one placed along the edge of the bench on the south.

The floor of the Hall is paved with larger tesserae.⁵ The pattern used is illustrated in Pls. LXI, 3 and LXII; the colours used are the same as those used for the surface of the bench below the arches.

The section of the Vaulted Hall west of the partition is paved with concrete.

¹ *QDAP*, Vol. V, p. 136.

² This, with the windows above it, was described in the first report, cf. *ibid.*, Vol. V, p. 137.

³ *Ibid.*, Vol. V, Pl. LXXXVIII, 1.

⁴ There were 156 tesserae in an area 10 × 10 cm.

⁵ There were 64 tesserae in an area 10 × 10 cm.

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The whole of the west wall, the sections of the north and south walls beyond the second pair of arches up to the eleventh course, as well as the sides of the arches up to the sixth course, are faced with bricks and plastered; the plaster is also continued over the ceiling, the rest of the walls of the side arches, and the walls above the arches up to the fourth course from the top of the arch. The remainder of the Hall is not plastered.

From below the half arch in the Sunk Court, at the north-west corner, a pottery pipe, coming from north below the West Cloister, turns west and runs over the Vaulted Hall¹ until it reaches the west wall where it turns south, and again vertically downwards about the middle of the west wall, and opens on to the partitioned section of the vault at 2.95 m. (viz. the eleventh course) from the floor (Pl. LXIII, 1).

Two pottery pipes (Pl. LXI, 1) were found below the partition on the east and one on the west side to enable waste water to escape. There was no direct connexion between these three pipes,² and all probably emptied into a drain at a lower level.

It is thus obvious that the section west of the partition was built for a purpose that required the use of a large amount of water, possibly a bath, with a shower. Bricks and plaster were necessary owing to the porous nature of the masonry used in the construction.³

Several decorated voussoirs, similar to those found last season in the Sunk Court,⁴ and two bases were found, amongst other things, in the Vaulted Hall, no doubt having fallen with the rest of the debris when the whole building collapsed.

In addition to the window over the door, the Vaulted Hall is lit by two other windows, one on each side of the former.⁵

The North Block. The North Block is occupied by a large hall 28.59 m. long and 10.90 m. wide (Pls. LXIII, 2 and LXIV, 1), marked North Hall in Fig. 1. One door, in the middle of the south wall, is the only means of access to it. There are twelve rectangular responds, six against each of the north and south walls, and six square piers in the middle. Each pair of responds, together with the square pier between them, supported an arcade, thus making six arcades in all. The arcades, together with the east and west walls of the Hall, apparently carried seven barrel-vaults of sun-dried bricks,

¹ Cf. *QDAP*, Vol. V, Pl. LXXXVIII, 1.

² This was tested when the mosaic floor was cleaned. Forty gallons of water escaped through the pipes on the east of the partition without even damping the other side.

³ Cf. *QDAP*, Vol. V, p. 134.

⁴ Cf. *ibid.*, Vol. V, Pl. LXXXVII.

⁵ Cf. *ibid.*, Vol. V, p. 137 and Pl. LXXXVIII, 1.

which were found lying disintegrated on the floor.¹ A number of moulded stones were found in the Hall, indicating the previous existence of a cornice round the top of the piers (Pl. LXIV, 2).

The floor of the North Hall was paved with rough concrete that had not been smoothed over. Fragments of decorated marble screens, in various stages of execution, were found lying on the floor (Pl. LXIV, 3). It appears that each screen was originally intended to be rectangular, and divided into two parts by a band running across the middle; each part was divided into a series of small round arches separated from each other by a thick band which, judging by the holes pierced along the middle, was intended to be decorated; in the spandrels of the arches are rosettes. The border and the band running along the middle of the screen were decorated. Only the lower half of the first screen was found (Pl. LXIV, 3*a*). The border is decorated in low relief with leaves, pine cones, and anthemions, on stalks which link up the different *motifs*. The decoration is complete in the major part, and only outlined in the remainder. The decoration of the band in the middle, which is not the same as that of the border, and the rosettes in the spandrels of the arches, are carved in outline only. Of the second screen (Pl. LXIV, 3*b*) only part of the upper half was found. The border appears to be decorated with intertwining branches carrying leaves and pomegranates. In the middle band, the branches carry vine leaves and bunches of grapes, the whole carved in outline only. A small part of the third screen was found (Pl. LXIV, 3*c*), the decoration on which had not even been started, but the surface of the marble was prepared for it.

It would here be appropriate to add a word on the construction of the building. All walls are built of two facings with rubble filling. The four outer walls of the building are bonded together. The internal partition walls are also bonded together, but form straight joints with the outer walls. It is thus evident that the outer walls were built first, and the other partition walls added later.

As has been shown, staircases lead up to a higher floor over the West and East Blocks. That a second story existed is borne out by other facts as well: a number of broken white marble columns, 26 cm. in diameter, and 2.30 m. in length, were found lying in the court in front of the larger columns (Pl. LXV, 1 and 2). These appear to have fallen from the first floor, from a position immediately above the lower order of columns. Corresponding

¹ Another possible method of roofing both this Hall and Halls III and III' is that used at Qaşr Kharrāneh in the two halls on the ground floor east and west of the Gateway. Cf. Jaussen et Savignac, *Mission Archéologique en Arabie*, Vol. III, Pl. XXIII.

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bases and capitals (Pl. LVII, 1-2) of these columns were found in the West and East Cloisters; the bases have grooves on two of the opposite sides. There were three screens between each pair of columns, connected by two decorated balusters of the same material. The balusters were grooved on two of the opposite sides for the screens to be keyed in, and are similar to those that were placed around the sunk court.¹ It is thus evident that these screens were intended to be placed between the higher order of the columns. In the debris in the Cloisters and in the Court, as far as it has been excavated, pieces of mosaic floor pavements were discovered (Pl. LXV, 3-4) which seem to have fallen from rooms of the higher floor.

The evidence at our disposal so far points to the previous existence of another floor over the West and East Blocks. There does not seem to have been more than one floor in the North Block. It is not safe to draw any conclusions regarding the unexcavated South Block yet.

The building does not appear to have been completely finished. It was seen that the carving of the stucco over the north wall of the Entrance Hall had not been completed; one of the plaster screens in Room II (*a*) had only just been started; the marble screens in the North Hall were complete only in parts; the floors in Rooms II' (*a'*) and (*b'*), III' (*a'*) and (*b'*), and Hall III' were either half done or not even started, and the tiles stacked in Hall III' were prepared and never used. Further, the pavements, where complete, show tool-marks and are everywhere in excellent condition and could not have been used for any length of time. Not only does this show an abandonment of work, but a sudden and simultaneous interruption all over the site. It has been shown in the first report² how the building had suffered considerably by earthquakes. Was the earthquake of A.D. 746 responsible for interrupting and destroying the building before it had been completed?

After being abandoned the site was reoccupied a second time. During this period, besides the blocked-up door between Rooms I (*c*) and (*d*) mentioned in the first report, the doors between Rooms II' (*a'*) and (*b'*) and Rooms III' (*a'*) and (*b'*) were blocked up and an intrusive wall was built in Room II' (*b'*) (Pl. LXVI). Two intrusive rooms were also built in the North Hall, near the north-west corner (Pls. LXIII, 2 and LXIV, 1).

The pottery found in the reinhabited rooms belongs to the twelfth century and will be described in the final publication.

There is hardly any doubt that the original construction is a palace of the

¹ Cf. pp. 162-163.

² Cf. *QDAP*, Vol. V, p. 137.

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'Umayyad Period like its parallels at Mshattā,¹ Qaṣr Kharrāneh,² and Qaṣr eṭ Tūba,³ and the bath at Quṣair 'Amra⁴ in Trans-Jordan. Although no precise dating can be given at present, the palace must have been built between A.D. 705 and 750. The identification with Byzantine Gilgal proposed by the Rev. A. M. Schneider, in so far as it touches this building, must be entirely abandoned,⁵ although the site of Byzantine Gilgal may be quite close.

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¹ Brünnow and Domaszewski, *Die Provincia Arabia*, Vol. II, p. 105 ff.; Creswell, *Early Muslim Architecture*, Part I, pp. 350 ff.

² Jaussen et Savignac, *Mission Archéologique en Arabie*, Vol. III, p. 51.

³ Jaussen et Savignac, *Mission Archéologique en Arabie*, Vol. III, p. 29; Creswell, *Early Muslim Architecture*, Part I, p. 376.

⁴ A. Musil, *Kusejr 'Amra*, Vols. I and II, Vienna 1907; Jaussen et Savignac, *Mission Archéologique en Arabie*, Vol. III, p. 78; Creswell, *Early Muslim Architecture*, Part I, p. 253.

⁵ Cf. ZDPV, Vol. LIV, 1931, p. 50.



1. Gateway, south side.



2. Gateway, north side.

EXCAVATIONS AT KH. EL MEFJER



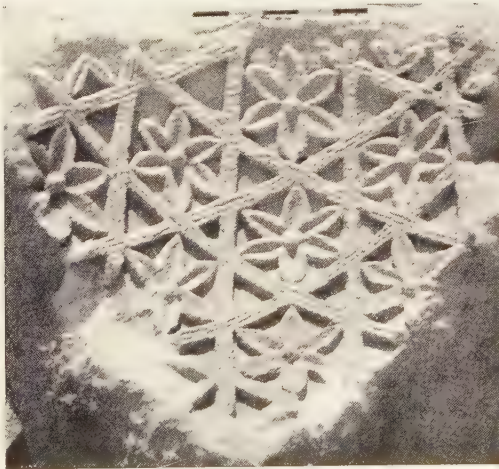
1. Base of engaged column used in niches of Gateway.



2. Decorated band below niches of Gateway (detail).



3. Niche head, broken.



4. Niche heads, broken.



1. Lintel found inside the door.



2. Stones with rosettes found in Gateway.

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1. Entrance
Hall, looking
east.



2. Entrance
Hall, north
side.

EXCAVATIONS AT KH. EL MEJER



Entrance Hall ; middle cluster of columns on south side.

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1. Cluster of columns in north-west corner of the Entrance Hall.



2. Middle cluster of columns, north side of Entrance Hall.

EXCAVATIONS AT KH. EL MEJER



1. Entrance Hall, stucco on wall between second and third clusters of columns from the east, on the south wall.



2. Stucco on wall between the second and third clusters of columns from the east, on the north wall.

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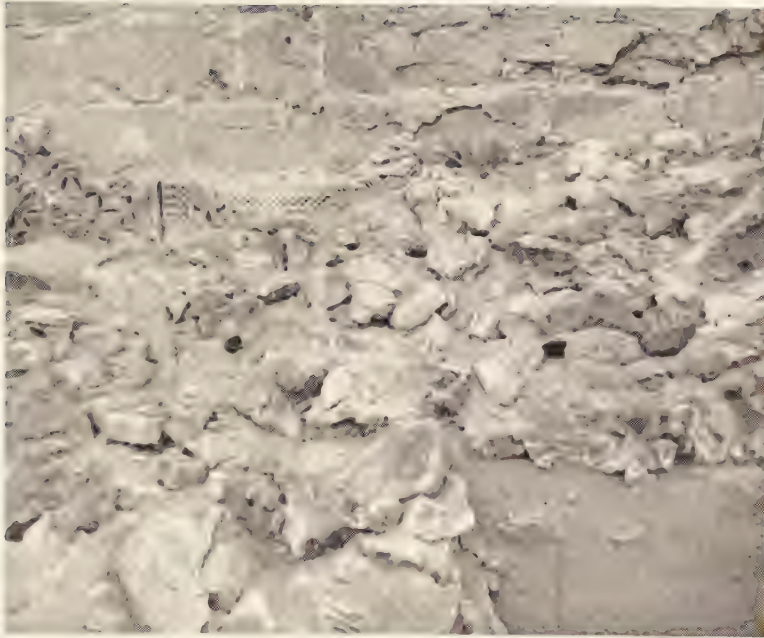


1. Carved plaster found outside the Gateway.



2. Entrance Hall; plaster found in the debris.

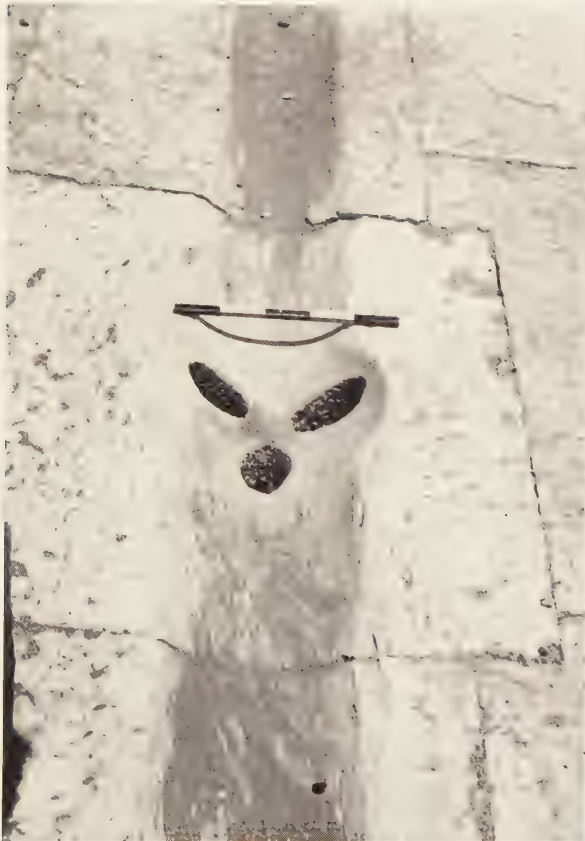
EXCAVATIONS AT KH. EL MEFJER



Entrance Hall. Plaster found in the debris.
EXCAVATIONS AT KH. EL MEFJER



1. Entrance Hall. Arch bricks found on benches.



2, 3. Court. Grooved channels above the drain, with sumps and trefoil holes.

EXCAVATIONS AT KH. EL MEFJER



1. Stairway in the northern extension, East Cloister.



2. East Cloister. General view, showing displaced and broken column shafts.

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1. Stairway in southern extension, West Cloister.



2. West Cloister. General view, showing positions of fallen column shafts.

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1. North Cloister. General view.



2. North-east pier. Pilaster at end of south arm.



3. North-east pier. Pilaster at end of west arm showing the square stone basin.



3. Arch painted in red on west wall of Room II (*a*).



1, 2. Capital and base (grooved on two sides) of upper order of columns.

EXCAVATIONS AT KH. EL MEFJER



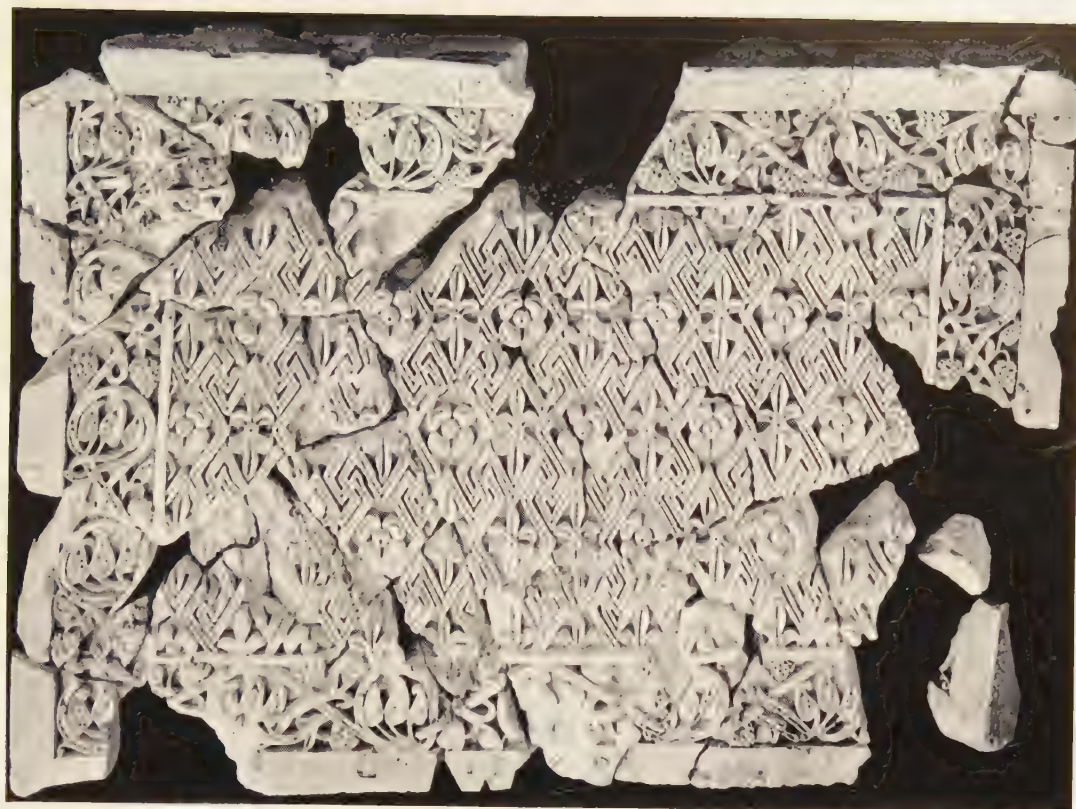
1.



2.

Plaster screens found in Room II (*a*).

EXCAVATIONS AT KH. EL MEFJER



1.



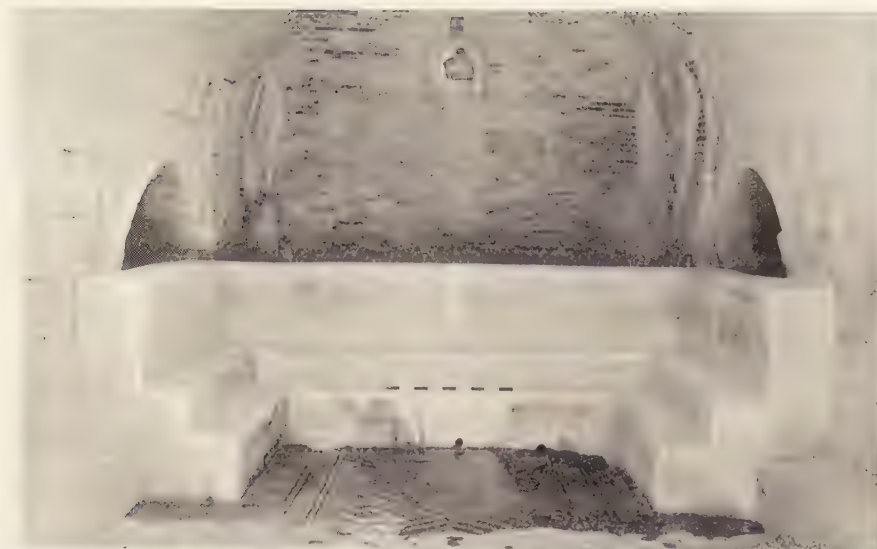
2.

Plaster screens found in Room II (a).

EXCAVATIONS AT KH. EL MEFJER



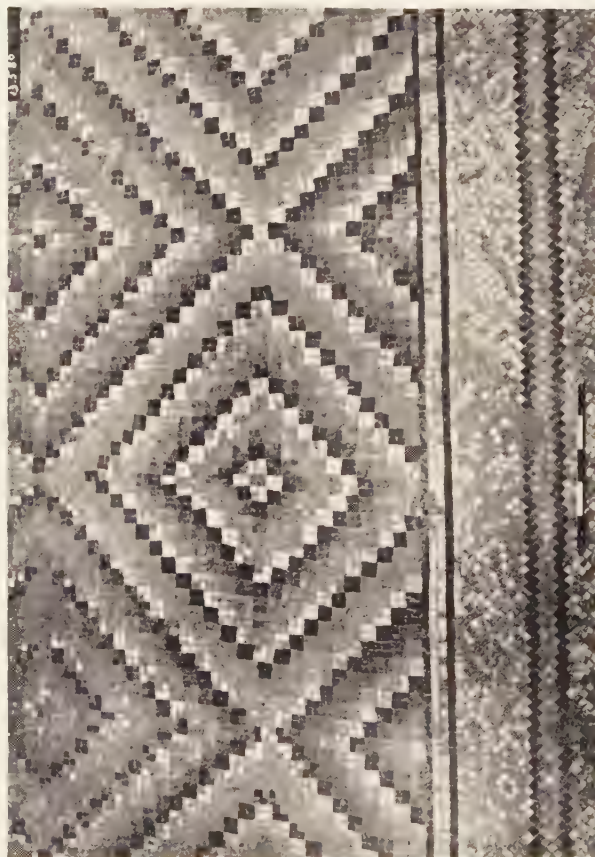
Hall III'. Tiles stacked against south-west corner.
EXCAVATIONS AT KH. EL MEFJER



1. Subterranean Vaulted Hall, showing the partition, pottery pipes, the second pair of side arches, the brick-faced walls, and the inlet in the west wall.



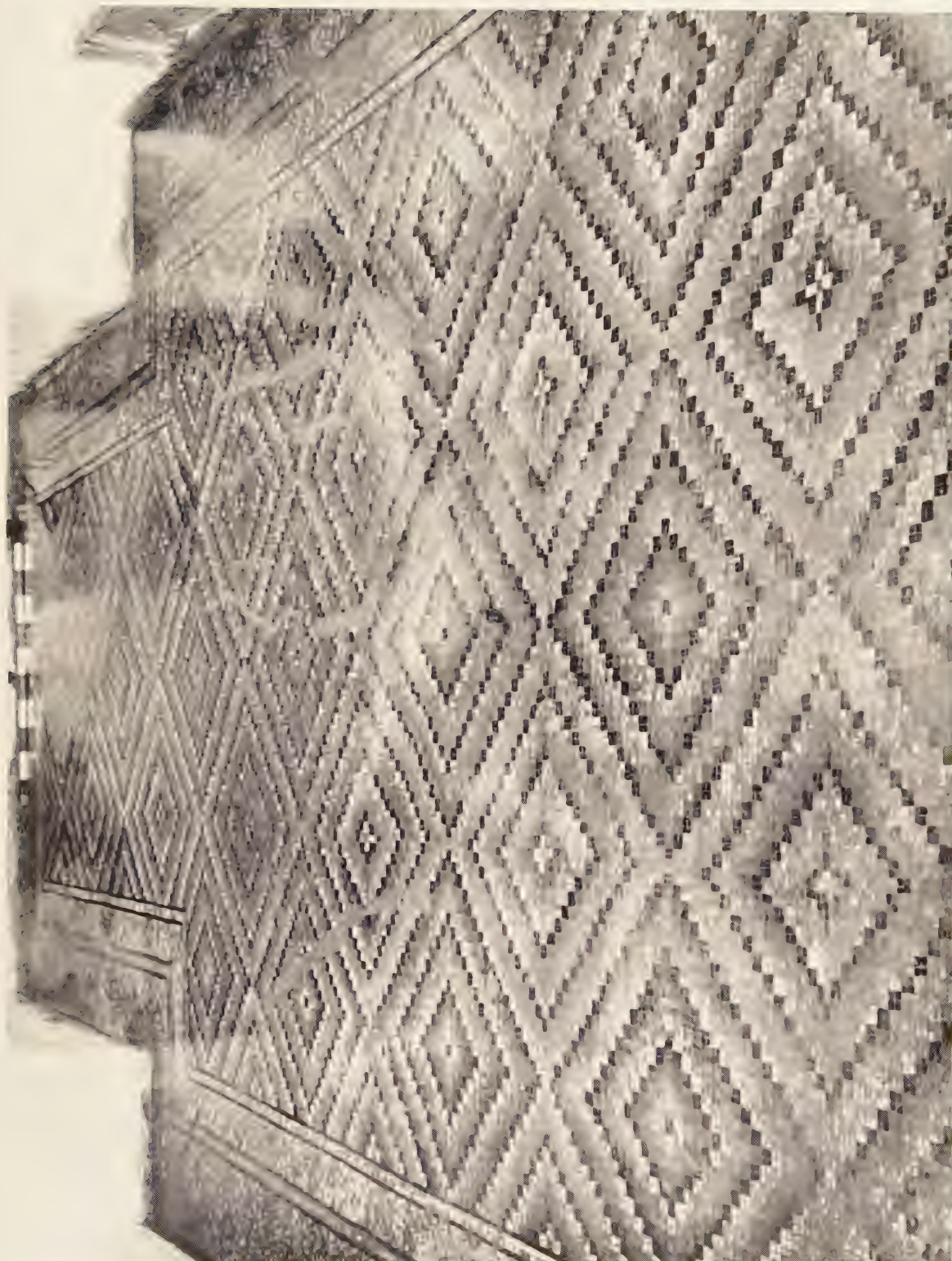
2. Mosaics below first pair of side arches.



3. Mosaic pavements of floor (detail).

Subterranean Vaulted Hall.

EXCAVATIONS AT KIL EL MEFJER



Subterranean Vaulted Hall. Mosaic pavement.
EXCAVATIONS AT KH. EL MEFJER



1. Subterranean Vaulted Hall. Details of west end.



2. North Hall, looking north-east.

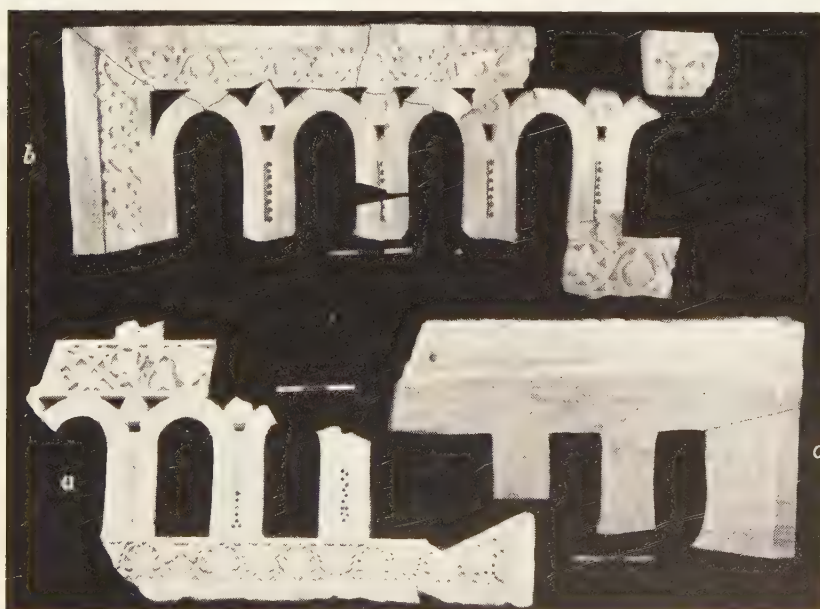
EXCAVATIONS AT KH. EL MEFJER



1. North Hall, looking south-west.



2. Details of cornices in the North Hall.



3. Marble screens found in the North Hall.



1, 2. White marble columns from first floor.



3, 4. Mosaic fragments found in the Court and the West Cloister, northern extension.

EXCAVATIONS AT KH. EL MEFJER



1. Room II' (b'). Intrusive wall, looking north-east.



2. The same, looking north.

EXCAVATIONS AT KH. EL MEFJER

THE 'TOGGLE-PINS' IN THE PALESTINE ARCHAEOLOGICAL MUSEUM

THE attempt to make the toggle-pin a clue to the migrations of peoples during the late third and the early second millennium B.C. has resulted in its being invested with a greater importance than is usually given to such trifling objects. The purpose of the present study is twofold: first, to see if the deductions made from its appearance in the different parts of the world are really tenable, and secondly, if it is justifiable to attribute to the toggle-pin such an important role, having in mind that the 'transmission of cultural elements has undoubtedly always been more complex than archaeology can reveal'.¹ Moreover, so much has been said about the name and use of the toggle-pin that an attempt should be made to settle all the questions at once.

Name and use. The toggle-pin will probably never lose the attribute 'so-called' or get a more significant name. The name is neither correct nor satisfactory, but there is little hope of its ever disappearing from archaeological literature. It is so handy and has already been used by so many scholars, at least in Palestinian archaeology, that various attempts to replace it by 'eyelet-pin' or some other descriptive term have not been followed. The first to give this name was Sir Flinders Petrie who in the reports of his various excavations has published scores of specimens. He chose this name because he was of the opinion that 'these pins were used to fasten garments, being secured to one edge by a string through the hole in the middle, and then passed through an eyelet in the other edge'.² As we shall see, its use as a toggle cannot be upheld and consequently the name has no logical meaning. It is of the nature of a toggle that its parts are equally long, the balance being in the centre. But even supposing that the unequal length could be compensated for by the weight, the name toggle implies that both parts are treated alike. An object the two parts of which are so different from each other as those of the so-called toggle-pins cannot act as a toggle. For the hole is neither in the geometric centre nor in the centre of gravity; moreover, one end is pointed and the upper part frequently decorated. The point would not be required to pass the pin through a buttonhole, nor would the decoration of the upper part be justified if both parts are equally visible. Moreover, the use of buttonholes in these early times is by no means certain. The toggle-pin

¹ R. M. Engberg and G. M. Shipton, *Notes on the Chalcolithic and Early Bronze Age Pottery of Megiddo*, p. 77, with regard to this peculiar problem.

² Sir Flinders Petrie, *Hyksos and Israelite Cities*, p. 12.

has been also explained as a hairpin, and this suggestion has recently been adopted by Dr. Albright for the Palestinian specimens.¹

At Kish in Mesopotamia pins have been found, which certainly are of a very similar type (Fig. 1).² Mackay reports pierced pins found 'close to the head', in tombs of both sexes.³ At Ur, however, similar pins were found, but in this case clearly 'against the upper arm'. 'The cloak or shawl fastened over the shoulder was still the normal garment for both sexes, judging by the pins found against the upper arm.'⁴ In other excavations also the shoulder is reported to be the place where the pins are found when *in situ*.

But there is another fact, illustrated by the pin U. 9151 of Ur (Fig. 2), which excludes absolutely the use as hairpins even in Mesopotamia.⁵ 'Through the hole passes a copper ring from which hangs a very slender copper chain . . . which runs along the shaft to the point where a silver cylinder seal was found fixed by corrosion to the pin, having apparently been suspended by the chain. This is the most striking illustration of the (later) custom of carrying the cylinder seal tied to the pin.' It is hardly believable that a cylinder seal was fixed to the hair. There is no need to consider this pin an exception, as the use of these pins for the hair seems very doubtful from a practical point of view. 'A strand of hair . . . passed through the ring to prevent the pin from slipping from the head', as suggested by Mackay,⁶ would have been a rather painful proceeding for any woman at any period, or, as toggle-pins were found with both sexes, for any man. But it should be considered

whether a pin like the one with the cylinder seal served even as a garment-pin. In order to handle the seal the pin would have to be taken out of the garment, which seems also rather inconvenient and improbable. For at least some of the Mesopotamian types the possibility must be taken into account that they have been used neither for fastening the garment nor for fixing the hair, but as a kind of stiletto. Their use as garment-pins may be doubted also on account of their width (Fig. 2). Anyway, in the case of the ordinary toggle-pins these objections are not valid, for

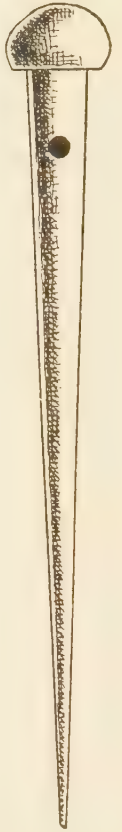


FIG. 1. Pin from the 'A' Cemetery at Kish. 1:1.

¹ W. F. Albright, Review of Watzinger, 'Denkmäler Palästinas, I,' in *JPOS*, Vol. XVI, p. 52.

² E. Mackay, *Report of the excavation of the 'A' cemetery at Kish, Mesopotamia*, I, p. 44 sqq., Pl. XIX; II, p. 169 sqq., Pls. XL, LVIII. Fig. 1 is taken from Pl. LVIII, 17 and enlarged to natural size.

³ Mackay, *Kish*, II, p. 170.

⁴ C. L. Woolley, *Ur Excavations, II. The Royal Cemetery*, p. 247.

⁵ Woolley, *Ur Excavations, II*, p. 542; Fig. 2 is taken from Pl. 231, 1 d, and enlarged to natural size.

⁶ Mackay, *Kish*, I, p. 45.

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the proofs which are in favour of their use as garment-pins are too manifold. There would, for instance, be no explanation for pins only a few centimetres long, which certainly would not hold the hair, but could easily have been used to fasten a child's garment of thin cloth (Tps. 28 and 102).¹ There is another indirect indication of the use as a garment-pin. A considerable number of the toggle-pins in the Palestine Archaeological Museum are slightly bent, the apex of the bent part being generally somewhat below the eyelet, so that a fairly strong pull must be supposed.²

If it were not for the objections made against the theory of their use as a garment pin, it might be unnecessary to give indirect proofs where a direct one exists. It seems unjustified to neglect the following evidence only because it is a remote one. In a tomb in Transcaucasia a pin has been excavated still attached to remains of cloth, showing the original method of use. The drawing, Fig. 3, is based on the sketch given by Morgan, who published this specimen.³ The pin served to fasten together both edges of the garment; a string attached to the eyelet was coiled round that section of the pin which was covered by the cloth. The other end of the string need not be fastened at all; if a simple loop is passed over the head of the pin, the fastening can never become untied and will close the dress tightly. The adjustment of the loop is, however, a modern reconstruction;⁴ in the Caucasus the end of the string was found twisted round the lower end of the pin, but the method of coiling is certain.⁵

¹ The toggle-pins of the Palestine Archaeological Museum are referred to as ‘Tp.’ with the number of the catalogue on pp. 190 ff.

² This observation has been already made by H. Thiersch, in A. Furtwängler, *Aegina*, p. 413.

³ J. de Morgan, *La Préhistoire orientale*, III, p. 294, Fig. 292.

⁴ This reconstruction was suggested by the modern way of securing ropes on boats and ships, where the coiling as found with the pins is used as well.

⁵ A coiled thread has been found with a toggle-pin in Cyprus (cf. Duemmler, *Älteste Nekropolen . . .* in *Ath. Mitt.*, XI, p. 220, Beilage, I, 15). That this way of attachment was used is accepted by practically all the authors who have written on the subject: H. Thiersch in Furtwängler, *Aegina*, p. 411; G. Richter, *Greek, Etruscan, and Roman Bronzes*, p. 303; G. Contenau et R. Ghirshman, *Fouilles du Tépé-Giyan*, p. 45. A slightly different use is suggested in the *Reallexikon der Vorgeschichte*, III, p. 284, Pl. 100, Fig. a (s.v. ‘Fibel’), where the thread coiled round the point of the pin corresponds with the thread, as published by Duemmler (see above), but which shows no conformity with the way used in the Caucasus specimen as published by Morgan (see note 3).

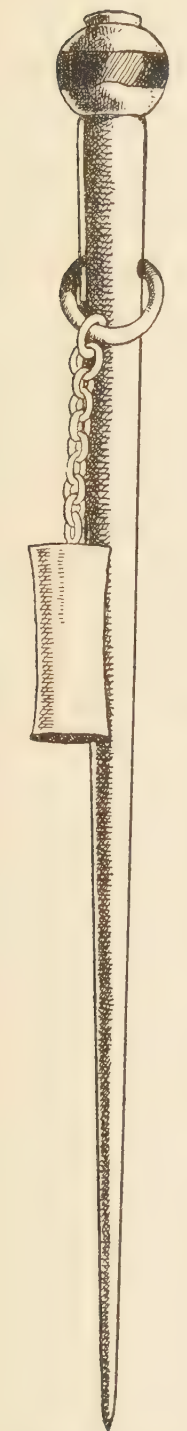


FIG. 2. Pin 9151 from Ur. 1:1.

A length of about 2 cm. above the eyelet is sufficient to hold the coiled string in position. All extension beyond that size is merely for the sake of decoration. One objection of Dr. Albright against the use as a garment-pin is based on the argument that the head is too thick to be passed through the cloth.¹ The head, however, is never pushed through the garment, but remains always on the outside, however long and thick it may be.²

A theory that the toggle-pin is the prototype of the fibula deserves attention. According to this theory the fibula owes its origin to the unintentional bending of the toggle-pin. The string corresponds to the pin of the fibula, having the same function of attaching the garment to the fastening object.³ Åberg even goes so far as to identify the toggle-pin with the straight part of the northern bipartite fibula,⁴ an argument which, however, does not apply to the fibulae of the south, where the pin is straight and the fixed part bent.

Types. The toggle-pins in the Palestine Archaeological Museum, more than 170 specimens, represent practically all the types found in Palestine up to the present. Three main groups can be distinguished, into which nearly all specimens fit, except a few pins which will be considered separately. The groups represent a chronological sequence. Group I is formed by a small number of pre-Hyksos pins (Pl. LXVII), II includes the large number of Middle Bronze II and Late Bronze pins (Pls. LXVIII–LXX), and III are a few Early Iron Age pins (Pl. LXXI).

The toggle-pin does not survive the Early Iron Age in Palestine, being then replaced entirely by the fibula. This fact will not cause surprise in view of the above-mentioned theory, according to which the toggle-pin and the

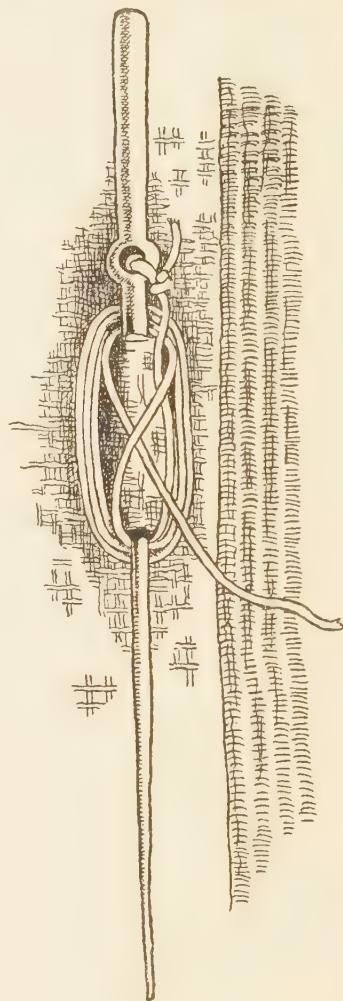


FIG. 3. The use of the toggle-pin. 1 : 1.

¹ W. F. Albright, Review of Watzinger, 'Denkmäler Palästinas, I,' in *JPOS*, XVI, p. 52.

² See also Contenau et Ghirshman, *Fouilles du Tépé-Giyan*, p. 45.

³ Undset in *Zeitschrift für Ethnologie*, XXI, 1889, p. 208 (not accessible); Ch. Blinkenberg, *Fibules grecques et orientales*, p. 39; H. Thiersch in Furtwängler, *Aegina*, p. 411; N. Åberg, *Mitteuropäische Hochbronzezeit*, p. 31 sqq.

⁴ N. Åberg, *Mitteuropäische Hochbronzezeit*, p. 32.

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fibula are nothing but variant forms of the same article. The invention of the more perfect implement makes the preceding superfluous. This sequence, observed in all countries which know both types, has been stressed by all who have written on the subject; it points once more towards the use of both objects as a garment pin.



FIG. 4. Toggle-pin 68 in the Palestine Archaeological Museum. 1 : 1.

The subdivisions within the three main groups are arranged schematically, chiefly in order to split up the large number of Middle and Late Bronze pins which show comparatively small differences. No proper chronological development is attributed to the sequence of these subdivisions. All types of group II are common in Middle Bronze II as well as in Late Bronze I and II, though a slight change of style can be observed. The deeply moulded bronze pins, for instance, belonging to the groups 6 and 8 *c*, are not found earlier than Middle-Late Bronze. The shanks in Middle Bronze II are always slender, whereas the pins of Late Bronze sometimes show a tendency to become shorter and thicker (Fig. 4). In general, however, not only the same types but exactly the same shapes go on throughout Late Bronze. Therefore the present classification is based only on types, as they form more significant headings than a chronological classification would do. The type-list, however, does not cover all variations. Pins classified according to their heads should be subdivided again according to the shape of their shanks, but too detailed subdivisions would be beyond the aim of this classification. The single types are not

described, as specimens of all of them are given on the Plates LXVII–LXXI. One pin which does not show well in the photographs is drawn in Fig. 4 (Tp. 68).

I. PRE-HYKSOS

1. nail with semiglobular head
2. club

Plate LXVII

II. MIDDLE BRONZE II AND LATE BRONZE

A. without head

3. plain
4. plain, double pointed
5. incised
6. ribbed
- (a) regularly
- (b) with rhythmical change
- (c) in spirals
7. twisted

} decorated

Plate LXVIII

B. with head

Plate LXIX

- 8. nail
 - (a) plain
 - (b) incised
 - (c) ribbed
 - (α) regularly
 - (β) with rhythmical change
 - (γ) in spirals
- 9. knobbed
 - (a) round and pointed knob
 - (b) vase-shaped knob
 - (c) attached bead

Plate LXX

III. IRON I

Plate LXXI

A. without head

- 10. hollow pin (Late Bronze–Early Iron)
- 11. stake

B. with head

- 12. mushroom head
- 13. baluster shape

It is obvious that the sudden and frequent appearance of the toggle-pin in Middle Bronze II is connected with the Hyksos culture; but on the one hand there are some earlier pins and on the other hand they do not disappear with the end of the Hyksos period proper. Anyway they were a popular object of daily use during the presence of the Hyksos in Palestine. But it is astonishing that though toggle-pins have been found in Egypt, their number there is very limited.¹ The size within group II has a large range. The pins vary from 3·3 to about 20 cm., whereas in Cyprus and Mesopotamia pins of more than 30 cm. length are not uncommon. The eyelet is placed generally neither very high nor beyond the middle of the pin; between a quarter and two-fifths of the whole length is the average proportion.

The main material is bronze, but also silver, gold, electrum, and even bone have been used. The gold pins found in rather a large number in Palestine deserve special mention. We may distinguish two different kinds; some of them show most elaborate and skilled work, whereas others are made rather coarsely although of precious metal. That pins of the second kind at least have been manufactured in Palestine is shown by the mould from 'Ain Shems

¹ Sir Flinders Petrie, *Objects of Daily Use*, Pl. II, 13, 14. These are apparently the same pins as published in *Illahun*, Pl. XXII (quoted by Myres, *Cat. of the Cyprus Museum*, 1899, p. 54, Nos. 591–8).

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(Pl. LXX, Cat. No. I 8671 *b*).¹ A very similar one to Tps. 83 and 121 (Pls. LXIX and LXX) has been found in Cyprus, but as to the origin of these gold pins, which may also have been made in Palestine, nothing definite can be said. The Palestinian pins surprisingly show a much better craftsmanship than the Cypriote specimen.

The Middle and Late Bronze types offer no problems: this is also true of the Iron Age pins. There is one main feature above all which makes the latter different from other toggle-pins of any period: the eyelet slides down much nearer towards the point, well beyond the middle of the pin, making it top-heavy; this feature is aggravated by an extremely weighty top, combined with a short and thin point. All the different types show that peculiarity. The eyelet is usually pierced carelessly through the pin, while in preceding periods the shank is carefully split and bent outwards. With their heavy top the Iron Age pins must have been extremely inconvenient. They form just a debased continuation of a Bronze Age implement and it is not surprising that the whole type went out of fashion.²

The hollow pin (type 10) is the first type mentioned under III. As a matter of fact this type is neither a genuine Early Iron type nor can it be dated exactly within that period. Typologically and from its context it belongs to the transitional period between Late Bronze and Early Iron, and has only for the sake of convenience been incorporated in group III. The type exists only in two specimens found in the same tomb; it seems to represent a local invention due to an unskilled worker.

Date and origin of the pre-Hyksos pins. With regard to the origin of the toggle-pin we are bound to examine the pre-Hyksos pins, for it is necessary to study a phenomenon in its beginning and not when fully developed. It is much easier now to inquire into the problem than it was some years ago, as excavations in Mesopotamia have provided us with new material, and in addition to that the excavations at Megiddo have yielded two pre-Hyksos pins, a species hitherto unknown in Palestine. They link up with similar specimens in the Near East and even farther afield, and they might help in tracing the origin at least of the Palestinian groups.

Previously not strictly analogous toggle-pins have been brought into relation. But in order to find the origin of a type, one cannot consider all

¹ E. Grant, *Ain Shems*, II, Pl. XLVII, 8, p. 30. That this mould has been used for casting gold and not bronze is likely, as a mould unquestionably destined for a gold earring is carved on the reverse.

² The pins published by Sir Flinders Petrie in *Beth Pelet*, I, Pl. XXII, Nos. 218-22, are called 'Hyksos' only on the plate; they all come from Iron Age tombs, or from tombs without pottery, but evidently belonging to an Iron Age cemetery.

examples as equally valid. The fact that pins with pierced shanks and some herring-bone incisions have been found in different parts of the world, does not allow us to maintain that one of these groups depends on the other, without strong chronological and typological reasons.

The deductions which have been made are approximately the following: (1) The type of the toggle-pin was unknown in Palestine before the Hyksos.¹ Simultaneously with their invasion a large number of these pins appear. Thus it is obvious that the Hyksos brought this new feature with them from the north. (2) Toggle-pins have been found in the foundation deposit of Byblos. Some objects of that deposit can be traced to Caucasian origin. Not only torques but also toggle-pins occur in Transcaucasia. The Hyksos probably came from that region, therefore they brought thence the type of the pierced pin.

The clue to these deductions lies in the dating of the Byblos hoard, the Transcaucasian group, and the Palestinian pins, and in the relations between all of these.

The Byblos hoard has been dated by Hubert to 2000–1700 B.C.² Dr. Albright dates it more exactly, but within the same limits, to 1800 B.C.,³ and Père Vincent calls it twentieth century.⁴ The dating of Montet to the VIth Dynasty has not been accepted hitherto.⁵ On the other hand, Bissing⁶ doubts the early date of the deposit as a whole, and wants to bring parts of it down even lower than 1500.

The Transcaucasian group unquestionably contains iron objects.

In order to make it possible all the same to support the theory of Caucasian influence on Syria and Palestine, Hubert suggests firstly that the opinion of Chantre and de Morgan may be right, according to which the Iron Age in the Caucasus starts as early as 2000 B.C. Secondly he maintains that the presence of iron does not necessarily mean that objects found with it are all of such a late date, because of the inadequateness of the excavations in the Caucasus.⁷

¹ Sir Flinders Petrie established an earlier group and an earlier invasion of another people from the north (*Gaza*, II, p. 6), but the pins which he adduces for this purpose are scarcely of the early date he assumes.

² H. Hubert, 'De quelques objets de bronze trouvés à Byblos', in *Syria*, VI, p. 18.

³ In a lecture in the American School of Oriental Research in Jerusalem.

⁴ L. H. Vincent, 'Les fouilles de Byblos', in *RB*, 1925, pp. 177 sqq.

⁵ Hubert maintains that the date of 2000–1700 is given by Montet in the *Comptes rendus de l'Académie des Inscriptions*, 1923, pp. 84 sqq., but as far as I understand, Montet, in the publication of 1928 (*Byblos et l'Égypte*), attributes the jar found 'sous le dallage' to which the pins belong, to the VIth Dynasty (p. 129).

⁶ Fr. W. Frh. von Bissing, 'Die Funde . . . von Byblos', in *Archiv f. Orientforschung*, IV, p. 66.

⁷ Hubert, in *Syria*, VI, p. 22; see also Frankfort, *Studies in Early Pottery*, II, p. 150.

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With regard to the first argument, the early beginning of the Iron Age in the Caucasus, good evidence exists that Asia Minor exported iron already during the second millennium,¹ but there is no proof that the Caucasus was among the countries which regularly obtained iron from the south. Except for a few isolated objects made of meteoric iron previous to the Iron Age proper, the finds nowhere confirm an extensive distribution of that metal, at least not as much as would be expected according to the reports of an iron trade quoted by Wainwright. The difference is evident between a few isolated iron objects of high value and the general use of iron, which began in the Mediterranean countries about 1200 B.C.

The second argument might be acceptable in itself, as the excavations in Armenia and Persia cannot claim an exactness of stratification. From a typological point of view, however, it seems not possible to derive the Byblos pins from the general Transcaucasian type. The Byblos type is practically limited to one shape, a pin pierced rather near the club-like head (Fig. 5*a*);² the pins are either undecorated or show inconspicuous herring-bone incisions round the eyelet. In addition to these there is one pin with a big flat nail head (Fig. 5*b*).³

On the other hand, Fig. 6 shows the different shapes of the Transcaucasian pins. They are either stake-like with comparatively low eyelet and with rich decoration of herring-bone incisions, covering the shank above the eyelet, or they have squat heads combined with a short thin point and with a similar decoration (Fig. 6*a-c*).⁴

It is evident that the Byblos pins cannot depend on that

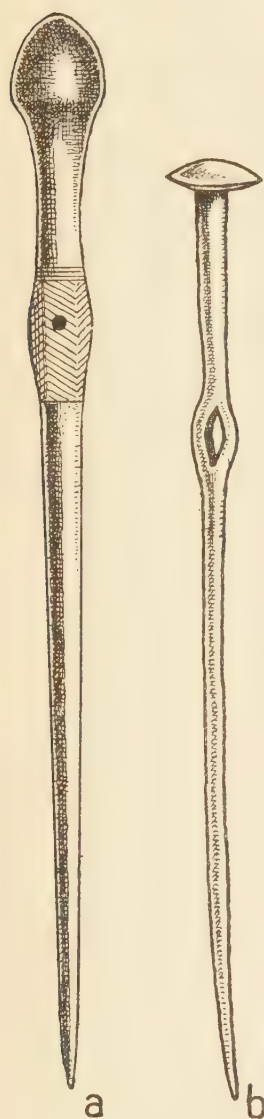


FIG. 5. *a, b*. The main types of the Byblos deposit. 1 : 1.

¹ G. A. Wainwright, 'The Coming of Iron', in *Antiquity*, 1936, p. 5 sqq.

² Byblos catalogue, No. 588; Montet, *Byblos et l'Égypte*, p. 122, Pl. LXIX; Fig. 5*a* brought to natural size.

³ Byblos catalogue, No. 589; Montet, *Byblos et l'Égypte*, p. 123, Pl. LXIX; Fig. 5*b* brought to natural size.

⁴ Hubert, in *Syria*, VI, pp. 21 and 24, Figs. 5 and 7. No information is given there as regards the sizes. The pins, Fig. 6, *d* and *f*, however, have been published by de Morgan, 'Recherches au Talyche persan', *Mem., Dél. en Perse*, VIII, whence the following dimensions result: 6*d* equals Fig. 780, p. 326, and measures 12.3 cm.; 6*f* equals Fig. 569, p. 302, and measures 17.2 cm. It follows that probably all the pins published by Hubert are larger than drawn in *Syria*, VI.

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Caucasus group, because the development of a type never starts with the elaborate and refined object and ends with the simple one, except when a

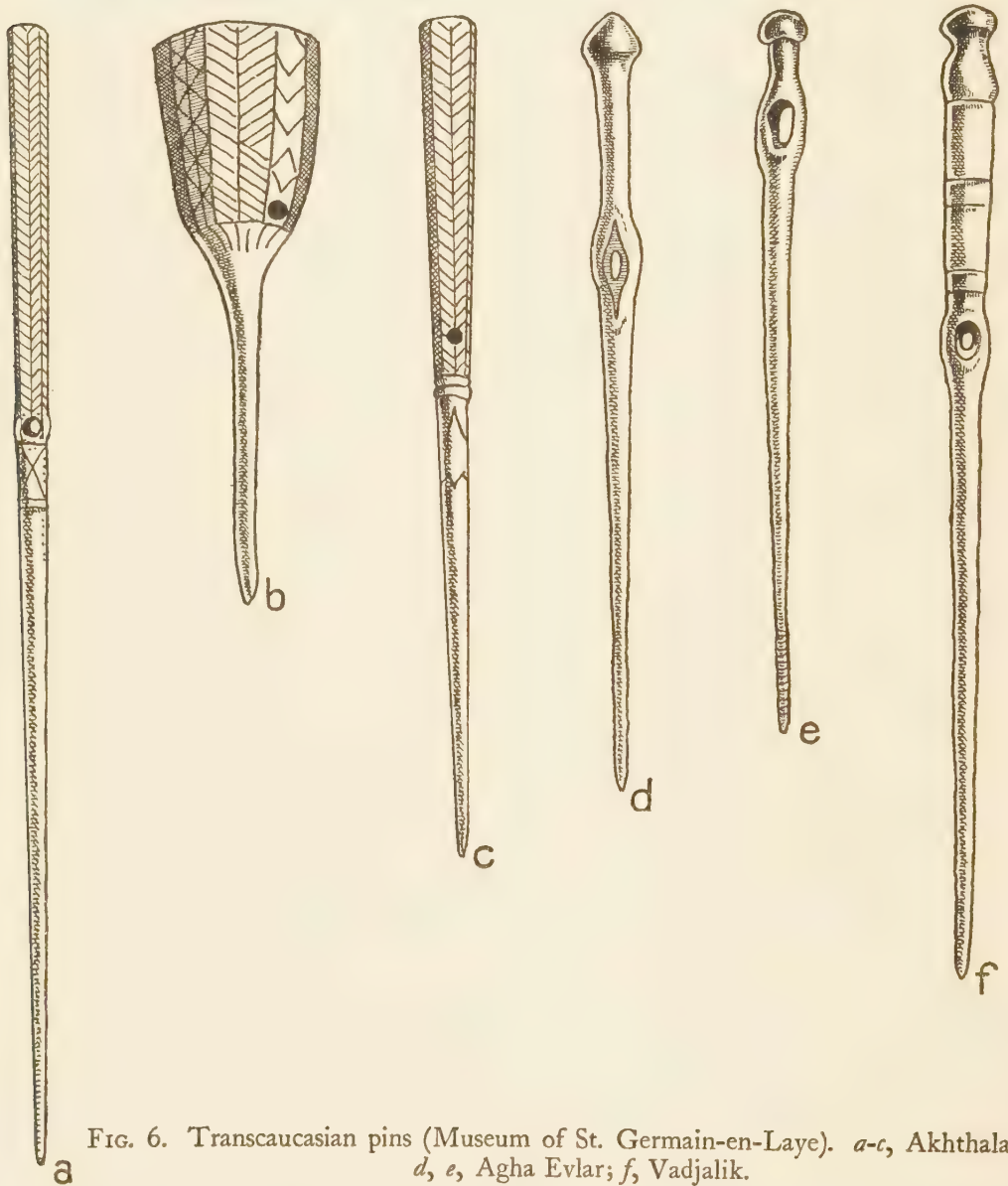


FIG. 6. Transcaucasian pins (Museum of St. Germain-en-Laye). *a-c*, Akhthala; *d, e*, Agha Evlar; *f*, Vadjalik.

complete break in the style can be observed. But wherever toggle-pins have been found, the first shape is always simple and the decoration appears only in a later stage of development. The improbability of a chronological sequence,

in which the Caucasus would precede and Byblos follow, is thus typologically confirmed.

There are, however, two pins of Agha Evlar in the Talysh (Fig. 6 *d, e*),¹ which are different from those depicted in Fig. 6 *a-c*; they have semi-globular heads and a general appearance of simplicity, one of them being distinguished especially by an eyelet near the head. They certainly form an earlier group; it is, however, surprising, that Hančar, who dealt with the Caucasus pins,² brings even these pins down to the last centuries of the second millennium.³ But without entering now into the discussion of that date, the difference between the pins of the Caucasus valleys proper (Fig. 6 *a-c*) and the Talysh (Fig. 6 *d-f*) should be strongly emphasized.⁴ It is obvious that the pins with the herring-bone pattern (Fig. 6 *a-c*) must be excluded at any rate from all comparison with the Byblos pins for chronological and typological reasons. For the Talysh group, however, these typological objections do not exist. But even if we accept the possibility of dating these pins much earlier than Hančar suggests, there is no need to call them a prototype of the Byblos group—it will be shown that both of them, the Byblos and the Talysh pins, are only members of the same widespread group.

Although Hančar, who examined the Caucasian pins especially from a typological point of view, accepts mutual influences between the south and the north, his study has been misunderstood. Sir Flinders Petrie sees his theory of the Caucasian origin of the toggle-pin confirmed by Hančar's paper.⁵ But on the contrary Hančar stresses the fact that, if the early date for Byblos is maintained, there is no connexion between the Caucasus and Byblos.⁶ And he says clearly that the toggle-pin, which he usually calls 'cyprische Lochnadel', comes from the south and passes from there to the Caucasus instead of vice versa.⁷ Although we can easily see how this misunderstanding

¹ Agha Evlar is a site in the Talysh, a province on the south-east coast of the Caspian Sea. The situation of the Talysh and the other Transcaucasian sites becomes clear from the maps in de Morgan, *La Préhistoire orientale*, III, p. 187, for the Talysh, and from Hančar, 'Die Nadelformen des prähistorischen Kaukasusgebietes', in *Eurasia Septentrionalis*, VII, 1932, p. 180, for the other sites, including Akhthala. A remarkable geographical distance is to be noticed between the sites of the Caucasus valleys proper and the Talysh. For the sizes see note 4, p. 177; 6 *e* has not been published by de Morgan.

² Hančar, 'Die Nadelformen des prähistorischen Kaukasusgebietes', in *Eurasia Septentrionalis*, VII, 1932, pp. 113 ff.

³ *Ibid.*, pp. 130 and 128. On p. 130 Hančar states that the Talysh culture is younger than the Gandsha-Karabagh culture; on p. 128 he roughly dates the latter to 1400–1250 B.C.

⁴ Vadjalik, which yielded roughly related pins (Fig. 6 *f*), is also situated in the Talysh.

⁵ Sir Flinders Petrie, *Gaza*, II, p. 6, and *Gaza*, IV, p. 10.

⁶ Hančar, 'Die Nadelformen . . .', p. 136.

⁷ *Ibid.*, p. 134.

arose owing to the detailed and complicated nature of the paper, there can be no doubt about the conclusions.¹

One of the Talysh pins, of Agha Evlar (Fig. 6 *d*), and the Byblos club-shape (Fig. 5 *a*) are certainly related; on the other hand, the other pin of Agha Evlar (Fig. 6 *e*) is related to Megiddo Tp. 1 (Fig. 7 *a*; Pl. LXVII, 1). Both of the groups—the first with the semi-globular head, and the second club-shaped—can be extended by the addition of further examples. Fig. 7 shows the pins with the semi-globular head: 7 *a* comes from Tomb 1014 B from Megiddo (Tp. 1; see also Pl. LXVII, 1); the dating to the transitional period between Early and Middle Bronze, that is to about 2000 B.C., is beyond all doubt. 7 *b* was found in a Hittite tomb at Hammām, 7 *c* in Troy, and 7 *d* at Lapithos in Cyprus. The Troy specimen is an isolated find and not dated by any context. It has been attributed to City II–V because of the similar Cyprus pin.²

The Hammām pin is dated to the first beginning of Middle Bronze,³ and the Lapithos specimen, originating from a recent excavation, has been dated by Gjerstad to the middle of Early Cypriote III, which means to the end of the third millennium.⁴ The four pins of Megiddo, Troy, Hammām, and Lapithos show the utmost resemblance and are, with the exception of Troy, dated roughly to the same period. As small differences in the chronology in the different countries must be taken into account, it seems premature to conclude any priority from these dates by themselves. Anyway, the pins are assigned to about 2200–1800 B.C. It may be repeated that the pin of Agha Evlar (Fig. 6 *e*) also belongs to the same type. As to its date, one might accordingly suggest a higher date than Hančar accepts. A very close similarity to the Troy specimen suggests a direct connexion with Troy, as we have indications for an export of these pins from Troy.⁵ We shall see later on

¹ Hančar, 'Die Nadelformen . . .', p. 134: 'Dass die transkaukasische Lochnadel auf direkte Verbindungen mit dem Süden, besonders mit Syrien, zurückgeht, erscheint mir ganz sicher.' Hančar apparently knows out of the Palestinian material only the Gezer pin published by Macalister, and he means Gezer with 'the South'; and p. 136: 'Die Entwicklung, welche die cyprische Lochnadel in Transkaukasien durchmachte . . .', p. 132: 'Wie die ältesten Formen . . . erkennen lassen, geht er (der Hauptnadeltypus) auf die cyprische Urform der Lochnadel zurück.'

² H. Schmidt, *Schliemanns Sammlung trojanischer Altertümer*, No. 6411, p. 254, and A. Götze in W. Dörpfeld, *Troja und Ilion*, I, p. 357, Fig. 295; Fig. 7 *c* brought to natural size.

³ C. L. Woolley, 'Hittite burial customs', in *AAA*, VI, pp. 87 ff., tomb group III from Hammām; Pl. XXI; Fig. 7 *b* brought to natural size.

⁴ E. Gjerstad, *The Swedish Cyprus Expedition*, I; from tomb 313 A, No. 115; Pl. XXIII, p. 93; Fig. 7 *d* brought to natural size.

⁵ It seems that one pin found in Bohemia in connexion with the Aunjetitz culture may be due to an export from Troy (cf. H. Schráníl, *Étude sur l'origine de l'âge du bronze . . .*, p. 95; Fig. in *Realexikon f. Vorgesch.*, I, Pl. 53 (p. 271) and Schráníl, l. c., Figs. 6, 9). Without going further

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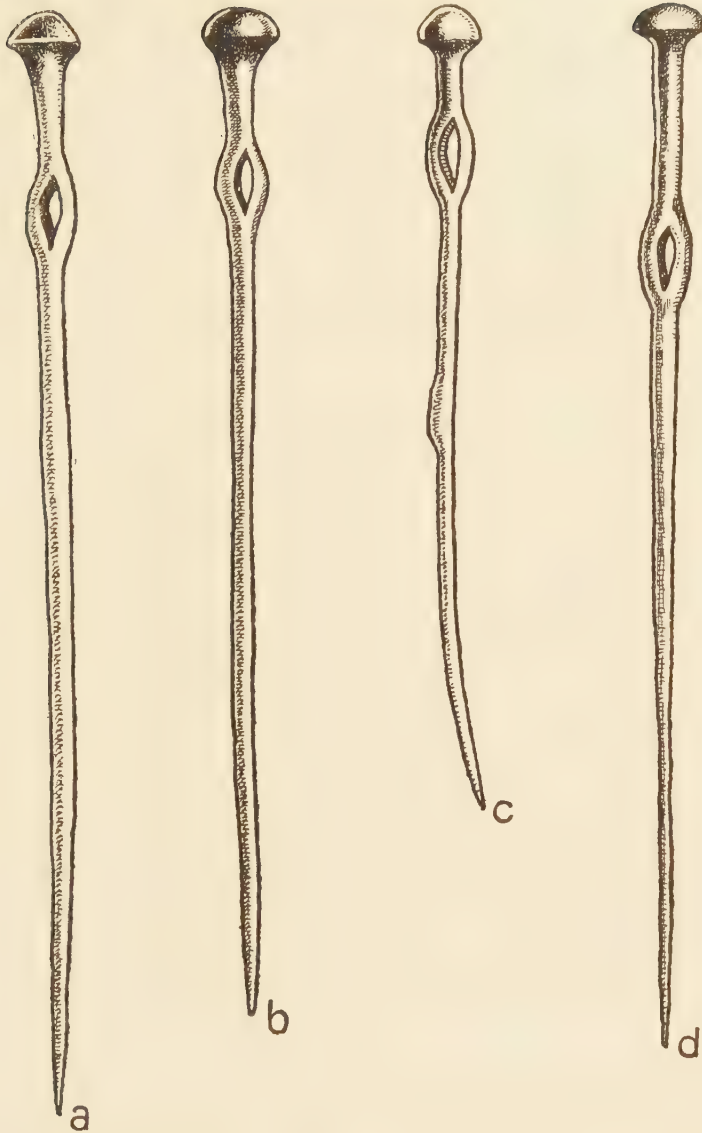


FIG. 7. *a*, Megiddo Tp. 1; *b*, Hammām; *c*, Troy; *d*, Lapithos. 1 : 1.

another pin apparently in close connexion with the group shown in Fig. 7 (Tepe Gawra).

into the question of the European pins, three other similar pieces shall be mentioned, one from Peschiera (Lago di Garda; Montelius, *La civilisation primitive en Italie*, Pl. VII, and Schrānil, *Étude sur l'origine...*, Fig. 6, No. 7), the second from Gorzano (Schrānil, *l. c.*, Fig. 6, No. 8), the third from Aegina, foundation of the East terrace (Furtwängler, *Aegina*, Pl. 114, No. 15, p. 397, No. 43). The date of the Aunjetitz culture, given by Childe, *The Danube in Prehistory*, as 1800-1300 B.C. (diagram after p. 418), would, at least in its beginning, match well with the date of the group Fig. 7.

The second group mentioned above contains the other pin of Agha Evlar (Fig. 6 *d*), the chief type of Byblos (Fig. 5 *a*), and a second toggle-pin of Megiddo, from tomb '1101B Lower' (Tp. 2; Pl. LXVII). Though the outlines of the Byblos pins, found abundantly in the deposit (Fig. 5 *a*), are much more clumsy and the eyelet is distinctly different from the Megiddo specimen (Tp. 2; Pl. LXVII)¹ their shapes are more related one to another than they are to any other known type. There is no doubt about the date of the Megiddo Tp. 2; it comes from a tomb dated to Early-Middle Bronze, as Tp. 1 does. Thus both of these groups, the semi-globular nails and the clubs, are brought together by the unquestionable common date of the two Megiddo pre-Hyksos pins.

There are some other pins from Megiddo, two of them still more closely connected with the Byblos clubs, but unfortunately found in a later context.

Tp. 4 (Pl. LXVII, 4) seems to be just a thinner specimen of the same type as Tp. 2. Though it comes from a tomb which contained in one section Early-Middle Bronze pottery, it has not been attributed to that part of the tomb. Tp. 3 (Pl. LXVII, 3) resembles the Byblos pins most closely. But the tomb in which it was found (1100 D) contains Middle-Late Bronze pottery. The fragmentary pin Tp. 5 (Pl. LXVII, 5) increases the number of puzzling specimens. It was found in tomb 912 B which is a Late Bronze tomb, but in association with some blunt arrows, so that it is provided with the excavator's note:² 'perhaps reused as blunt arrow'. The resemblance of those pins to the Byblos clubs and to the two undoubtedly early Megiddo pins is so striking that it seems justifiable to judge on typological grounds even against the evidence of association. In the vast number of the other toggle-pins no other specimen of that club shape has been found in Palestine. Unfortunately a Middle Bronze I pin from Rās el 'Ain, which might have given further help, is so fragmentary and corroded that the club shape can only be guessed at but not accepted for certain.

But there is no reason to lower the date of the Byblos deposit on the ground of these three toggle-pins of Megiddo (Tps. 3-5; Pl. LXVII), which would be absolutely unusual in Palestine at a late period. Their early date is certainly not established on strong arguments, but typologically it seems impossible to separate them from the well-dated pins Tps. 1 and 2. Though the three Megiddo pins Tps. 3-5 are not immediately necessary to link up

¹ According to R. M. Engberg and G. M. Shipton, *Notes on Chalcolithic and Early Bronze Age Pottery* . . . , p. 56, it was made by hammering from one side.

² Not yet published; taken from the object cards of the Expedition of the Chicago Oriental Institute, in the Palestine Archaeological Museum.

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Megiddo with the north, they would confirm the connexion with Byblos. That the Byblos pins at least ought not to be dated later than 1800, seems to follow from these various affiliations. Megiddo acts as a centre, where all the lines of the pre-Hyksos pins meet; it is not intended to say that they all originated actually from Megiddo, but the connecting links have been preserved accidentally in Megiddo.



A common origin of the pins collected in Fig. 7 is suggested by a comparison with all the known material. Their features are so similar that they not only stand out from all the other pins, but even give the idea of a very close local connexion.

On the other hand it seems unlikely that the type of the toggle-pin in general should be traceable to a common prototype; big geographical distances and too different types have to be taken into account. Toggle-pins were used in the Bronze Age not only in the eastern countries and in the south of Europe, but even as far away as south Germany and England.¹ One can scarcely avoid adding the toggle-pin to the number of implements which human invention devised independently at several places. But there certainly exists one centre of origin for the group given in Fig. 7. They are not only connected by close similarity, but also by being dated to about the same period. That chronological homogeneity, however, is greatly disturbed by a toggle-pin from Tepe Gawra (Fig. 8)² which, except for its being smaller, is almost identical with the Hammām pin (Fig. 7 *b*). Stratum VI, in which nineteen of these pins have been found,³ is dated by Speiser to about 3000–2500 B.C. The earliest

FIG. 8. Pin from Tepe Gawra VI. 1:1.

pin of group Fig. 7, on the other hand, is about 2200 B.C., and they reach well into the second millennium. Theoretically there are four possible ways in which we might establish a connexion between these toggle-pins. It could be suggested either that they are due to independent invention or that the type continues for nearly a millennium; the two other explanations being either wrong dates of the group of Fig. 7 or the lowering of the absolute date of Tepe Gawra VI. In practice none of these solutions seems really satisfactory, the most probable still being

¹ Åberg, V., *Mitteuropäische Hochbronzezeit* . . . , pp. 17, 18, 31; and British Museum, *A Guide to the Antiquities of the Bronze Age*, p. 57.

² E. A. Speiser, *Excavations at Tepe Gawra*, I; Pl. L, 8, p. 109.

³ Only one of the nineteen pins of stratum VI is illustrated on Pl. L, but on p. 109 it is mentioned that all of them are alike.

the long duration of the type, especially if we accept the idea that 'inter-dependent regions were often out of step with each other as regards civilization' (Speiser). Moreover, the type of the eyelet pin lived on in the succeeding strata of Tepe Gawra, though it was very limited in numbers.¹ The other arguments are rather beside the point; the pins, above all those of Hammām and Tepe Gawra, are so similar that a direct connexion may be presumed; the dates of the group concerned may be subject to slight corrections, but as they are got from different sources they can hardly all be wrong; as regards Tepe Gawra VI, the date cannot be discussed here, but it ought however to be noted that some of the relations outside of Mesopotamia which Speiser adduces for the confirmation of the date 3000–2500 B.C. are not absolutely convincing.²

Anyway, the question of the origin of the whole group seems to be settled by the Tepe Gawra specimens. For whatever absolute date is accepted for Gawra VI, it is previous to any of the cultures to which the pins of Fig. 7 belong. Thus the theories of another origin have to be abandoned.³ First and foremost neither the Talysh nor the Caucasus can claim to be the country of the invention of that pin.⁴ I have tried to prove that even if Tepe Gawra

¹ Two in stratum V; two in IV; one in III (Speiser, p. 114).

² Some of the comparisons outside Mesopotamia really do not seem conclusive: the architectural plan of Tepe Gawra VI is characterized by rows of structures built along three sides of the mound, leaving a square in the centre; the fourth side is protected by a steep slope (Speiser, p. 149, Pl. VII). Speiser compares this plan with that of Tuleilat Ghassul (Mallon, Koeppl, Neuville, *Teleilat Ghassul*, Rome, 1934, p. 33), but that mound is nearly triangular with houses built all around; there is, moreover, no square in the centre, which is nearly entirely covered with houses. But even if the plans were more alike, it seems so natural to protect a mound by building houses along the edges that it is difficult to follow a conclusion with the same date as its end based on such a similarity. Also 'serpents in relief on jars' are no proof for a Chalcolithic date, as they occur in Palestine also in other periods, e.g. in Middle Bronze II. The 'covered wagon' from Tepe Gawra is brought into relation with two other specimens from Transcaucasia and North Syria by Przeworski, but he did it under the impression that Tepe Gawra was to be dated c. 2200 B.C. The cylinder seal from Cyprus, which Speiser compares with No. 67 from Tepe Gawra VI (p. 130), is dated to the second millennium. Finally, it may be noticed that Speiser, who established detailed relations as far as available, did not look for a comparison for the toggle-pins, which form a characteristic feature of Tepe Gawra VI.

³ Dr. Albright maintained a Mesopotamian origin in the Review of Watzinger, 'Denkmäler Palästinas, I', *JPOS*, XVI, p. 52, but relying apparently only on the Ur and Kish specimens.

⁴ Frankfort also seems to accept the priority of the Caucasus (*Studies in Early Pottery*, II, p. 147) though he says on pp. 149–50 cautiously with regard to the relations between Byblos and the Caucasus, that Hubert has shown that the torques and pins 'belong to one family', and he stresses the difficulties of dating the Caucasian objects. In the later publication, however (*Archaeology and the Sumerian Problem*, pp. 52 sqq.), Frankfort devotes a chapter to the question of the primacy of the Caucasus in metallurgy. On the other hand, Przeworski, as quoted by Speiser, p. 167, criticizes this position and stresses that the earliest occurrence of some of the objects in question has been recorded in Mesopotamia.

were left out of the question, Transcaucasia is far from playing any leading role in the history of the toggle-pin. If, moreover, the late dates of Hančar be maintained, the chronological sequence would exclude a priority of any of the Transcaucasian types without further proof. But even if the Talysh group could be roughly synchronized with the other pre-Hyksos pins, they form such an isolated unit after the exclusion of the certainly later Transcaucasian pins, that there is no reason to trace the whole group from the region of the Caspian Sea. There is such a close similarity between the one from Agha Evlar (Fig. 6 e) and that of Aunjetitz, that a direct dependence is equally possible (Cf. p. 180, n. 5).

Cyprus, which was commonly supposed to be the origin of the toggle-pin, must also be given up in favour of Mesopotamia. For, even if the type was already found in Early Cypriote tombs,¹ yet one of the earliest forms is to be derived from Mesopotamia. Cyprus is not the only country where large numbers of toggle-pins were used. Mesopotamia may well compete, as is shown for instance by the excavations of Tepe Giyan, where various shapes have been found, beginning with *Couche* IV, and in large numbers in

Couche III, dated by the excavators about 2000 B.C.²

It must be taken into consideration that the Hittites have played a role in the preservation of the toggle-pin, if nothing more, as is proved by some varieties in the burials published by Woolley. But up to the present too little is known about Hittite tombs to allow of more exact conclusions in this direction.³

Finally, a toggle-pin should be duly mentioned, to which Professor Albright was kind enough to draw my attention. He saw it in a Palestinian excavation of 1934 in an Early Bronze II context, and gave me the sketch reproduced in Fig. 9. Unfortunately I did not succeed in tracing that piece either from



FIG. 9.

the indicated excavation or from any other. It can only be hoped that the mention of it will lead to its discovery, which might throw a new light on the whole problem. Because of this pin Dr. Albright thought that the

¹ Gjerstad, *The Swedish Expedition . . .* I, Tombs 313 A, 318, No. 24, p. 127, in Lapithos. Also Myres, in the *Catalogue of the Cesnola Collection*, dated the pins 4677-4691 to Early Bronze, so that it seems not quite clear how Watzinger, in *Denkmäler Palästinas*, I, p. 36, establishes a priority of the Palestinian pins (till then only Middle Bronze pins were known) over the Cypriote pins.

² G. Contenau and R. Ghirshman, *Fouilles du Tépé-Giyan*. Tomb 102 in *Couche* IV, which precedes *Couche* III, yielded the first pierced pin (pp. 44 sqq.), in *Couche* III nearly all the tombs have toggle-pins, mostly with cone-shaped head (Tombs 83-101); in the following strata they occur occasionally till the Iron Age.

³ See also Hančar, 'Die Nadelformen . . .', in *Eurasia Septentrionalis*, VII, p. 127.

toggle-pin had already appeared in Palestine in Early Bronze.¹ But as it is the only specimen dating from that period and so far the only cone-shaped one, the question must be left open until the reference can be identified.

Conclusion. The earliest pierced pins come from Mesopotamia (Ur, Kish) (Figs. 1, 2), and are dated to c. 3400–3100 B.C.² Considerable numbers of later toggle-pins have been found in Tepe Gawra (Fig. 8) and Tepe Giyan, without, however, showing such typological connexion as would allow an affiliation with the previous pins of Ur and Kish. Those of Tepe Gawra link up with a group of pins found in various countries surrounding the Mediterranean, dating from about 2200–1800 B.C. (Fig. 7). Subsequently similar types appear in Europe and Transcaucasia.

All the pre-Hyksos pins here dealt with form a more or less homogeneous group, originating apparently from Mesopotamia (prototype Tepe Gawra). The variety of these pre-Hyksos pins which include also the Byblos club, remains within narrow limits, so that a common origin may be inferred without straining the evidence. Possibly one centre of manufacture existed. The distribution of the pins is not likely to have been due to a people who left them on their trail, but seems to have been performed by trade. In that way they reached even such remote places as Aunjetitz and the Talysh.

A new wave of toggle-pins appears in Palestine with the Hyksos. There is no immediate typological connexion between the pre-Hyksos and the Hyksos pins, though a relation is not out of the question.

After the expulsion of the Hyksos from Palestine the type lives on, though reduced in numbers. No entirely new features are invented—the old ones go on. Another attempt to keep this implement in use is made by the Iron Age people, whose types, however, are nothing but debased Hyksos shapes. The main type of that period, the stake (Pl. LXXI), is related to a more refined though similar and apparently simultaneous type in Transcaucasia (Fig. 6 a–c). In Iron I the toggle-pin is replaced by the fibula.

Many problems, no doubt, remain unanswered. One of the most interesting questions might be whether the Hyksos themselves invented the toggle-pin or whether they encountered and adapted the pre-Hyksos pins on their way from the north.

Singular shapes. A few toggle-pins must still be mentioned, some of them

¹ Dr. Albright told me of this pin in 1935, and apparently alluded to it in the Review of Watzinger, 'Denkmäler Palästinas, I', *JPOS*, XVI, p. 52. The size is uncertain.

² This early dating, however, is disputed. In his first report Woolley dated Ur earlier still by a century, Dr. Albright, in *American Journal of Archaeology*, 1934, p. 609, places it 3000–2900 B.C., whereas Frankfort, in *Archeology and the Sumerian Problem*, accepts c. 2900–2500 B.C. (Table I, following p. 72).

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quoted in the catalogue under type 14, some others under the type to which they belong.

Tp. 139 (Fig. 10) forms a parallel to the bone pin, Tp. 10. This one and the other bone pins excavated at Tell el ‘Ajjūl are carved carefully and shaped like the metal pins, only being flatter. The Tell Beit Mirsim specimen, on the contrary, is a nearly unwrought bone, but pierced near the centre like an ordinary toggle-pin. It shows again the popularity of that implement, in providing us with a specimen made out of the cheapest material and by primitive means.

Tp. 89 represents the only specimen found in Palestine with a ring passed through the eyelet. As it is too much decayed to be photographed it has been drawn in Fig. 11. This ring occurs on the early Mesopotamian eyelet pins and in Tepe Giyan, and is also common on the Late Bronze pins of Cyprus. Recently several Middle Bronze specimens have been found in Rās Shamra;¹ thus Tp. 89 is no longer isolated within that period. Evidently the thin ring is far more exposed to decay than the thicker pin itself. Nor does the ring make any difference as regards the use and general shape of the toggle-pin—thus the ringed pin cannot be considered as a type by itself.

Two Iron Age pins could not be allotted to any of the Iron Age types.

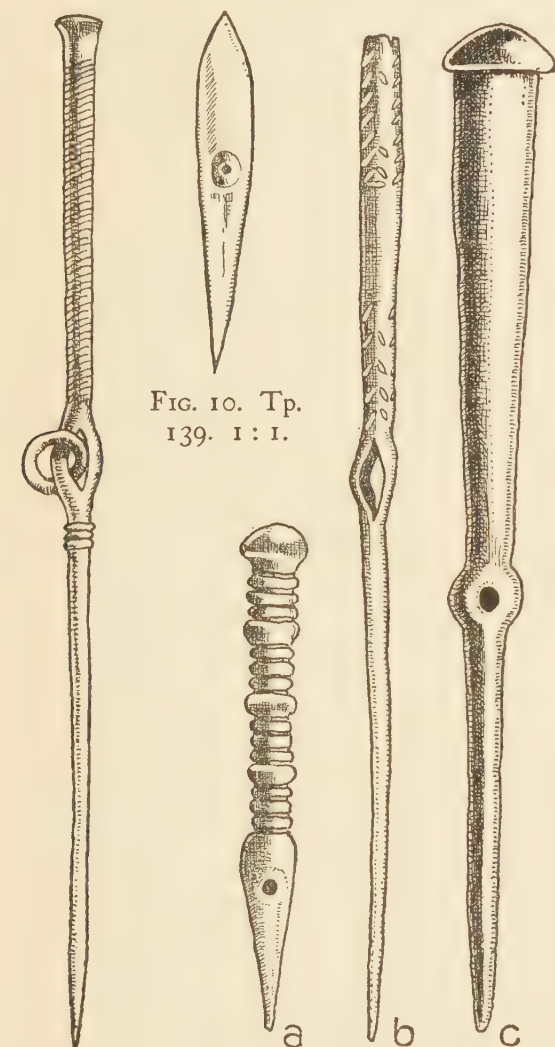


FIG. 11.
Tp. 89. 1:1.

FIG. 12. *a*, Tp. 140; *b*,
Tp. 141; *c*, Tp. 128. 1:1.

Tp. 140 (Fig. 12 *a*) has a knob-head and a shank similar to the type 8 *c* β. The ring-incisions, however, are more distant from one another than in Middle-Late or Late Bronze, and moreover below the small, irregular eyelet,

¹ C. Schaeffer, ‘Les fouilles de Ras Shamra-Ugarit’, in *Syria*, XVII, Paris, 1936, p. 129, Figs. 17 and 19.

which resembles more a hole, follows a very short point. The proportions are certainly that of an Iron Age pin and it was also found in an Iron Age context. It can, no doubt, be called an Early Iron Age pin, but it is remarkable that an earlier type has apparently been copied and altered according to the new style in a later period.

Tp. 141 (Fig. 12 *b*) has the slender proportions and the general appearance of a Middle Bronze pin, but was nevertheless found also in an Early Iron context. Were it not for a kind of rather deep and short herring-bone incisions, a pattern unusual in Middle Bronze, the pin would pass for one of that period. So it seems probable that it is really a later specimen, but with strong resemblance to the Hyksos type.

Finally, a word should be said as to Tp. 128 (Fig. 12 *c*). It has an obvious Iron Age form with its lowered eyelet and mushroom shape. As it came from near a chalcolithic cemetery in the Jordan valley, it was first thought to be of a very early date, which supposition, however, did not agree with the shape. Mr. René Neuville, who kindly gave me permission to publish it, assured me that the tomb in which it was found has no connexion with the chalcolithic cemetery at Wādi 'Aḏeime. He has published another tomb from the same place¹ to which the new burial is similar. As this one is dated to the Late Bronze-Iron I period, no difficulty arises in regarding the Wādi Muḥtarja pin as an Iron I specimen.

E. HENSCHEL-SIMON.

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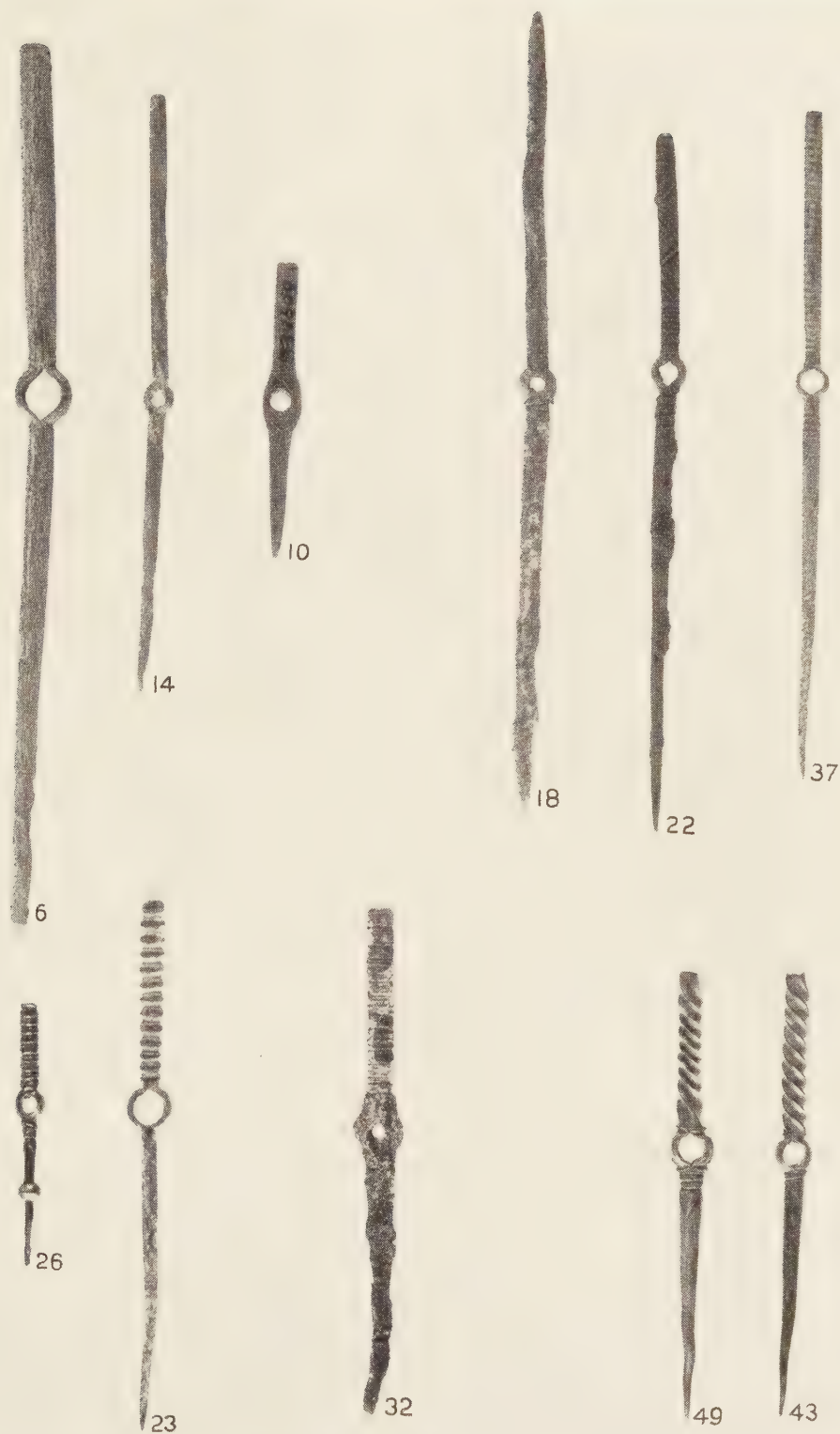
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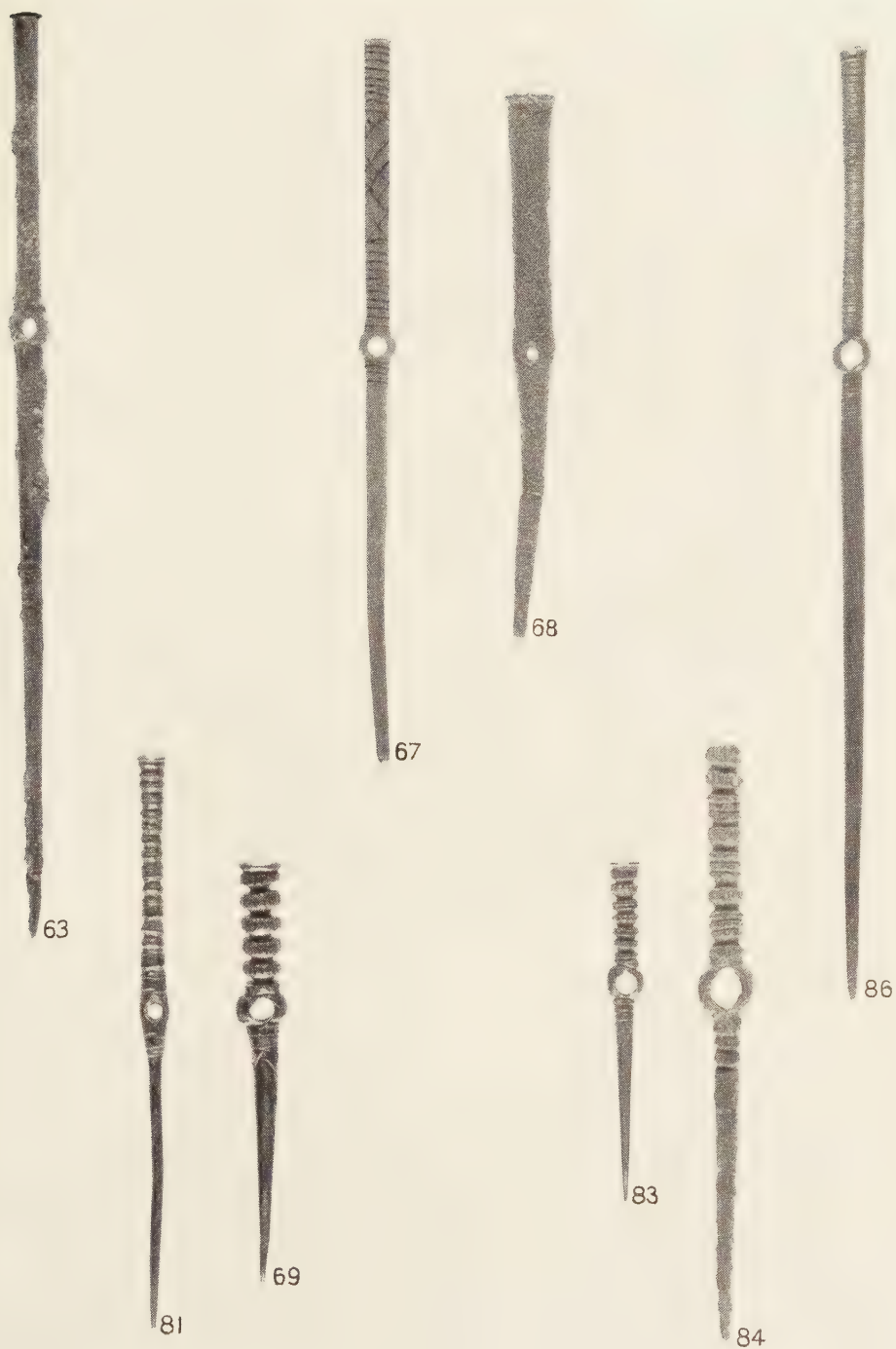
Type 1: Tp. 1
Type 2: Tps. 2-5



'TOGGLE-PINS'

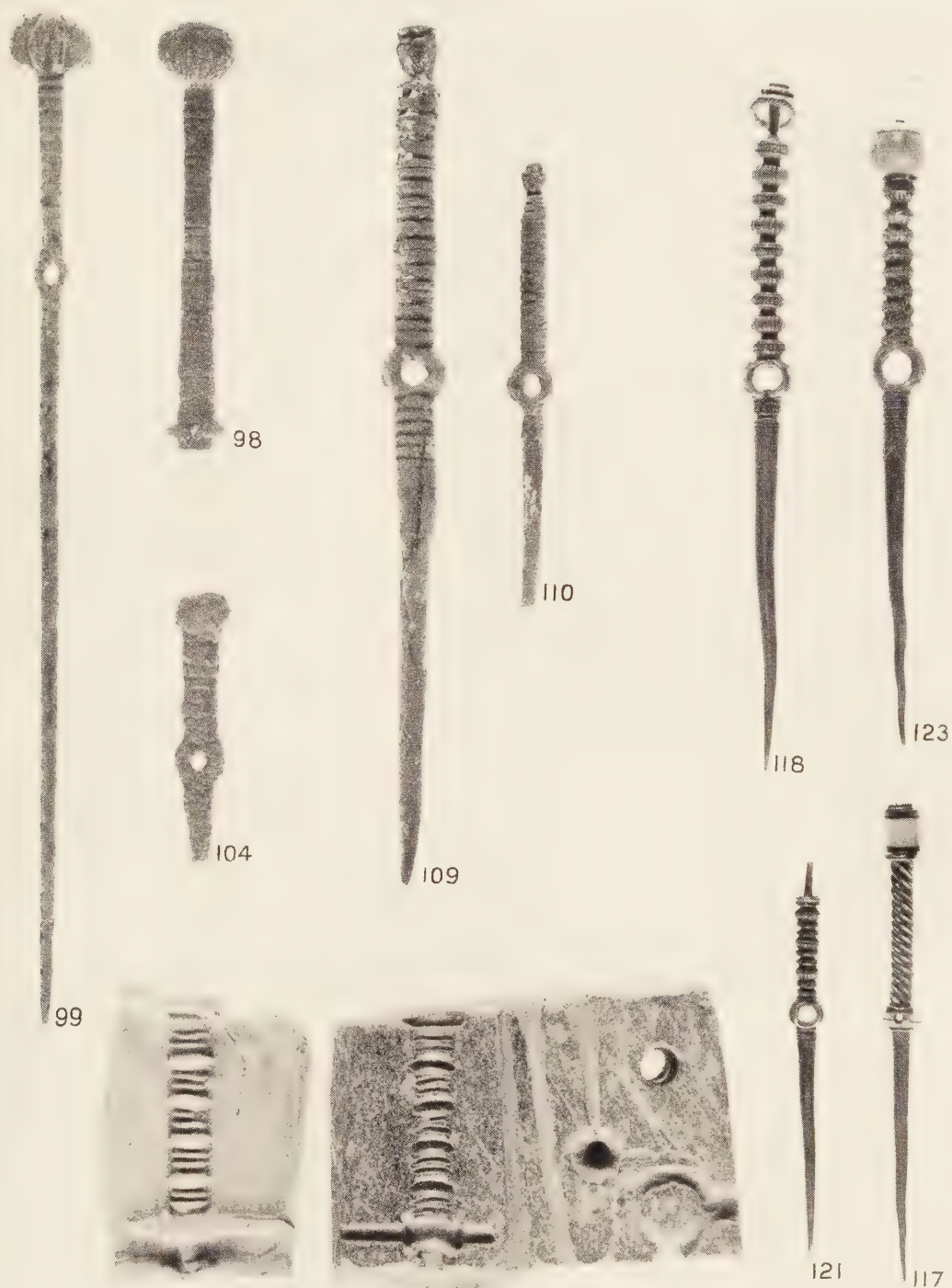
Type 3: Tps. 6, 10, 14
 " 4: Tp. 18
 " 5: " 22

Type 6 *a*: Tps. 23, 26
 " 6 *b*: Tp. 32
 " 6 *c*: " 37
 " 7: Tps. 43, 49



‘TOGGLE-PINS’

- Type 8 *a*: Tp. 63
 „ 8 *b*: Tps. 67, 68
 „ 8 *c* *a*: „ 69, 81
 „ 8 *c* *β*: „ 83, 84
 „ 8 *c* *γ*: Tp. 86



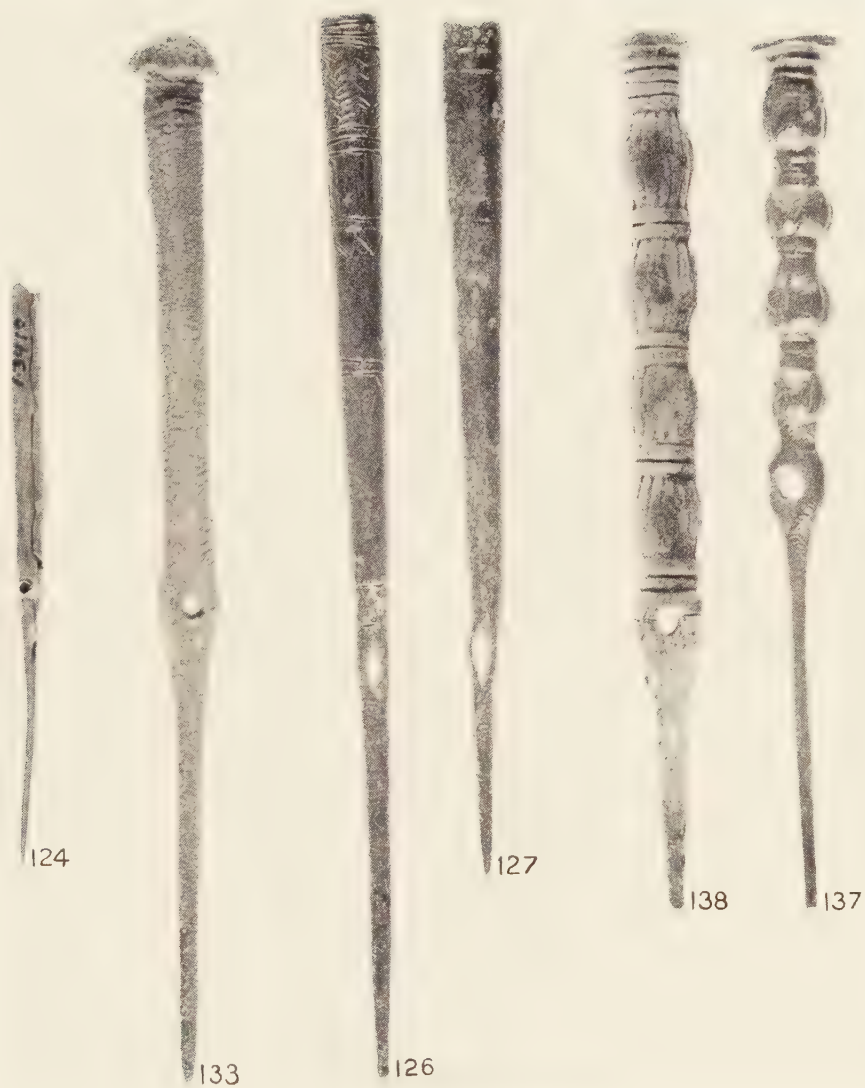
I 8671b

'TOGGLE-PINS'

Type 9a: Tps. 98, 99, 104

" 9b: " 109, 110

" 9c: " 117, 118, 121, 123



‘TOGGLE-PINS’

Type 10: Tp. 124
 „ 11: Tps. 126, 127
 „ 12: Tp. 133¹
 „ 13: Tps. 137, 138

CATALOGUE OF THE TOGGLE-PINS IN THE PALESTINE ARCHAEOLOGICAL MUSEUM

Dates marked with an asterisk are ascertained from associated objects, mostly from pottery.

The material of the pins has not been analysed except for Tps. 1 and 2; the results of the analysis are given according to Engberg and Shipton. The material of the 'Ajjūl pins is given according to Sir Flinders Petrie's publications and reports.

The existence of a considerable number of pins of unknown provenance is due to their survival in the Museum from the pre-War period.

The 'original lengths' given have been calculated from the proportions of the pins as extant.

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<i>Tp.</i>	<i>Site</i>	<i>Place</i>	<i>Exc. No.</i>	<i>Mus. No.</i>	<i>Material</i>
<i>Type 1. Nail with semi-globular head</i>					
1	Megiddo	Tomb 1014 B	M. 3225	34.2133	'Metallic copper'
<i>Type 2. Club</i>					
2	Megiddo	Tomb 1101 B Lower	M. 3634	34.2287	'Copper'
3	Megiddo	Tomb 1100 D	M. 3471	34.2248	Bronze
4	Megiddo	Tomb 911 A	M. 2774	34.1789	Bronze
5	Megiddo	Tomb 912 B	M. 3021	34.1909	Bronze
<i>Type 3. Without head, plain</i>					
6	Tell el 'Ajjūl	Tomb 1695	189 c	35.4096	Bronze
7	Jericho	Tomb 5 F	538	32.1223	Bronze
8	Tell el 'Ajjūl	TM 880	1420	35.4284	Bronze
9	Tell ed Duweir	Tomb 129	718	33.1953	Bronze
10	Tell el 'Ajjūl	Q 950 = 990	1467	33.1609	Bone
11	Tell el 'Ajjūl	EZ 80	1398	35.4263	Bronze
12	Hebron	Middle Bronze tomb	..	M. 1078/1	Bronze
13	Hebron	Middle Bronze tomb	..	M. 1078/3	Bronze
14	Unknown	..	..	M. 289	Bronze
15	Unknown	..	..	M. 293	Bronze
16	Unknown	..	..	M. 295	Bronze
17	Tell el 'Ajjūl	Tomb 1055	249	32.1906	Bronze
<i>Type 4. Double pointed, plain</i>					
18	Jericho	Tomb 31	248	33.1192	Bronze
19	Jericho	Tomb 30 b	158	33.1105	Bronze

'TOGGLE-PINS'

Size in cms.		Condition	Illustrated or referred to	Reference and remarks	Period	Tp.
actual	original					
Type. 1. Nail with semi-globular head						
14.8		Complete	Pl. LXVII, Fig. 7 a, p. 181	Engberg-Shipton, pp. 76-7, Fig. 20 A	E.-M.B.*	1
Type 2. Club						
11.8	12.2	Point missing, bent	Pl. LXVI, p. 182	Engberg-Shipton, p. 56, Fig. 15 (p. 55)	E.-M.B.*	2
13.6		Complete	Pl. LXVII, p. 182	Note that the L.B. pin, Tp. 78, from the same tomb, is of a quite different type	E.-M.B. ?	3
8.5	9.3	Point missing, bent	Pl. LXVII, p. 182	..	E.-M.B. ?	4
4.6	14.0	Broken off below eye-let	Pl. LXVII, p. 182	..	E.-M.B. ?	5
Type 3. Without head, plain						
12.4	14.0	Point broken off	Pl. LXVIII,	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 487	M.B. II*	6
7.5	8.1	Broken, incomplete	..	Garstang, <i>Fericho</i> , AAA, XX, p. 35 (Fig. 10), 36	M.B. II*	7
8.6	8.9	Complete, bent	..	From the tell, no context; the same number in the find list gives a different design	M.B. II	8
13.5	15.0	Point missing, slightly bent	..	..	M.B. II*	9
4.2		Complete	Pl. LXVIII, p. 187	Petrie, <i>Gaza</i> , III, Pl. XXVIII, 34, p. 11. In <i>Gaza</i> , I, Pl. XXI, 97, 98, two similar bone pins	M.B. II*	10
10.7	11.0	Bent, point missing	..	From the tell, no context. Very thin	M.B. II	11
12.7		Complete	..	The pottery from the tomb rather early in type, together with Tps. 13, 64, 65	M.B. II*	12
14.6		Complete	..	The pottery from the tomb rather early in type, together with Tps. 12, 64, 65	M.B. II*	13
8.4	8.5	Point missing	Pl. LXVIII	..	M.B. II	14
10.6	11.0	Bent, point missing	..	..	M.B. II	15
10.0	10.1	Bent, top splintered off	..	..	M.B. II	16
				Petrie, <i>Gaza</i> , II, Pl. XVIII, 212; p. 8. 'XVIIIth Dyn.'	L.B. I*	17
Type 4. Double pointed, plain						
11.3		Complete	Pl. LXVIII		M.B. II*	18
12.0	12.2	Broken, top point missing		Type certain, in spite of the missing point	M.B. II*	19

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<i>Tp.</i>	<i>Site</i>	<i>Place</i>	<i>Exc. No.</i>	<i>Mus. No.</i>	<i>Material</i>
Type 4. <i>Double pointed (cont.)</i>					
20	Tell el 'Ajjūl	Tomb 12	..	I. 9850	Silver
21	Unknown	..	..	M. 292	Bronze
Type 5. <i>Without head, incised</i>					
22	Tell el 'Ajjūl	Tomb 1410 B	1144	32.2099	Bronze
Type 6 a. <i>Without head, ribbed regularly</i>					
23	Tell Fāri'a	?	?	M. 1188	Bronze
24	Tell el 'Ajjūl	Tomb 445	..	I. 10226	Bronze
25	Unknown	..	..	M. 286	Bronze
26	Tell el 'Ajjūl	Group 1299	78 a a	35.3854	Gold
27	Tell el 'Ajjūl	Tomb 1127	563	32.1965	Bronze
28	Tell el 'Ajjūl	..	1574	35.4382	Bronze
29	Tell el 'Ajjūl	Eu 900	1411	35.4275	Bronze
30	Tell el 'Ajjūl	TN 860	1122 B	35.4210	Bronze
31	Tell el 'Ajjūl	Tomb 435	7 e	35.3778	Bronze
Type 6 b. <i>Without head, ribbed, with rhythmical change</i>					
32	Jericho	Tomb 30 b	158	33.1103	Bronze
33	Jericho	Tomb 30 b	158	33.1101	Bronze
34	Jericho	Tomb 31	248	33.1190	Bronze
35	Tell el 'Ajjūl	Tomb 1934	275 b	35.4144	Bronze
36	Tell el 'Ajjūl	J 750	804 B	35.4174	Bronze
Type 6 c. <i>Without head, spirally ribbed</i>					
37	Tell el 'Ajjūl	AT 765 = 1070	..	33.1558	Bronze
38	Megiddo	Tomb 24	505	I. 3038	Bronze
39	Megiddo	Tomb 24	507	I. 3040	Bronze (copper?)
40	Megiddo	Tomb 24	506	I. 3039	Bronze

'TOGGLE-PINS'

Size in cms.		Condition	Illustrated or referred to	Reference and remarks	Period	Tp.
actual	original					
Type 4. <i>Double pointed (cont.)</i>						
6.7	7.7	Top point missing		Petrie, <i>Gaza</i> , I, Pl. XXI, 89	M.B. II*	20
10.2	11.5	Lower point missing	..	Type fairly certain, in spite of the missing point	M.B. II	21
Type 5. <i>Without head, incised</i>						
9.9		Complete, slightly corroded	Pl. LXVIII	Petrie, <i>Gaza</i> , II, Pl. XVIII, 205; p. 8. 'X-XIth Dyn.'	M.B. II*	22
Type 6 a. <i>Without head, ribbed regularly</i>						
7.4		Complete	Pl. LXVIII	Not possible to identify from Petrie, <i>Beth Pelet</i> , I	M.B. II	23
5.3		Complete, corroded	..	..	Late M.B. II*	24
10.0	10.5	Point missing, worn off, bent	..	..	M.B. II	25
4.1		Complete	Pl. LXVIII	Petrie, <i>Gaza</i> , IV, Pl. XIV, 19; p. 6. Bead 'in a casual position'	L.B. I*	26
6.4	6.6	Point missing, corroded, bent	..	Petrie, <i>Gaza</i> , II, Pl. XVIII, 216; p. 8	L.B. I*	27
2.8	3.3	Point missing, corroded	..	Found on tell, without associated objects	L.B. I	28
4.7	5.3	Point missing, corroded, broken, bent	..	Found without associated objects	L.B.	29
7.3	8.0	Point missing, corroded	..	Deeply moulded. Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 462	L.B. II	30
2.4	5.5	Broken off below eye-let	..	..	L.B. I*	31
Type 6 b. <i>Without head, ribbed, with rhythmical change</i>						
7.0	7.7	Broken, corroded, point missing	Pl. LXVIII	..	M.B. II*	32
13.4	17.0	Point missing, bent	..	..	M.B. II*	33
9.1	13.0	Point missing	..	The top part of the shank more regularly ribbed than the lower part	M.B. II*	34
6.4	7.0	Point missing	..	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 465	M.B. II*	35
	7.4	Complete, corroded	..	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 449. Found on tell; pottery from the same place M.B. II	M.B. II*	36
Type 6 c. <i>Without head, spirally ribbed</i>						
9.5		Complete	Pl. LXVIII	Petrie, <i>Gaza</i> , III, Pl. XXIV, 182	M.B. II*	37
12.9		Complete	..	..	M.B. II*	38
15.0	15.1	Complete, bent, worn off	..	..	M.B. II*	39
14.4		Broken, corroded	..	..	M.B. II*	40

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<i>Tp.</i>	<i>Site</i>	<i>Place</i>	<i>Exc. No.</i>	<i>Mus. No.</i>	<i>Material</i>
<i>Type 6 c. Without head, spirally ribbed (cont.)</i>					
41	Unknown	..	..	M. 281	Bronze
42	Tell Beit Mirsim	Sub C 2	2357	32.2765	'Copper'
<i>Type 7. Without head, twisted</i>					
43	Tell el 'Ajjūl	Grave 2, City	..	I. 9841	Gold
44	Tell el 'Ajjūl	Tomb 1214 D	59 l	35.3828	Silver
45	Tell el 'Ajjūl	Tomb 1214	59 m	35.3829	Silver
46	Gezer	Cave 28 II, Chamber b, Group A	..	M. 278	Silver
47	Tell el 'Ajjūl	Tomb 1551	151 t	35.4068	Silver
48	Tell el 'Ajjūl	E 750	803	35.4173	Silver
49	Tell el 'Ajjūl	Tomb 1502	122 a a	35.4033	Gold
50	Tell el 'Ajjūl	Tomb 1517	125 g	35.4042	Gold
51	Tell el 'Ajjūl	T 860	1419	35.4283	Bronze
52	Tell el 'Ajjūl	Group 1312	85 y1	35.3900	Silver
53	Tell el 'Ajjūl	E 782	904	35.4183	Bronze
54	Tell Jemme	..	..	33.1560	Bronze
55	Unknown	..	..	M. 288	Bronze
56	Unknown	..	..	M. 296	Bronze
57	Unknown	..	..	M. 287	Bronze
58	Unknown	..	..	M. 290	Bronze
<i>Type 8 a. Nail with flat head, plain</i>					
59	Jericho	Tomb 9 c	898	32.1403	Bronze
60	Tell ed Duweir	Tomb 1542	2089	34.2902	Bronze
61	Jericho	Tomb 5 g	727	32.1299	Bronze
62	Tell Fāri'a	Tomb 1024	..	I. 7185/86	Bronze
63	Tell el 'Ajjūl	Tomb 1410 B	1143	32.2098	Bronze
64	Hebron	'MB Tomb'	..	M. 1078/2	Bronze
65	Hebron	'MB Tomb'	..	M. 1078/4	Bronze
66	Unknown	..	..	M. 284	Bronze

'TOGGLE-PINS'

Size in cms.		Condition	Illustrated or referred to	Reference and remarks	Period	Tp.
actual	original					
Type 6 c. <i>Without head, spirally ribbed (cont.)</i>						
13.5	14.3	Point missing, bent, corroded	..	..	M.B. II	41
8.0	13.0	Broken off 3 cm. below eyelet	..	..	L.B. I*	42
Type 7. <i>Without head, twisted</i>						
6.3		Complete	Pl. LXVIII	Petrie, <i>Gaza</i> , I, Pl. XV; p. 7.	M.B. II*	43
12.6		Broken, upper part decaying, bent	..	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 435	M.B. II*	44
6.2	6.7	Point missing, corroded	..	..	M.B. II*	45
10.3	15.0	Broken off 4.5 cm. below the eyelet	..	Macalister, <i>Gezer</i> , Vol. I, p. 126, Vol. III, Pl. XXXI, 12	M.B. II*	46
5.2	5.4	Broken, part of eyelet missing, much worn off	..	Petrie, <i>Gaza</i> , IV, Pl. XXI, 223; p. 9	Late M.B. II*	47
5.7	6.3	Point missing, corroded	..	Not like the others, twisted from a square sectioned rod	..	48
6.3		Complete	Pl. LXVIII	Petrie, <i>Gaza</i> , IV, Pl. XVIII, 123; p. 8. 'XVth Dyn.'	M.-L.B.*	49
5.1		Complete	..	Petrie, <i>Gaza</i> , IV, Pl. XVIII, 98; p. 8. 'XVIIth Dyn.?'	M.-L.B.*	50
8.3		Complete, bent	..	..	M.-L.B.*	51
12.2		Complete, strongly bent	..	Petrie, <i>Gaza</i> , IV, Pl. XII; p. 5. From an unhomogeneous hoard	M.-L.B. ?	52
8.0	8.1	Point slightly bent	..	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 434; p. 11	M.B. II	53
9.1	9.2	Top chipped off	..	Petrie, <i>Gaza</i> , III, Pl. XXV, 187	M.B. II	54
8.5	9.0	Bent, point missing	..	..	M.B. II	55
8.1	8.2	Bent	..	..	M.B. II	56
9.2	9.6	Top damaged, point missing, bent	..	..	M.B. II	57
10.7	11.0	Top damaged	..	..	M.B. II	58
Type 8a. <i>Nail with flat head, plain</i>						
17.6		Complete, nail-head damaged	..	Extremely long point	M.B. II*	59
13.0	13.5	Point missing, bent	..	..	M.B. II*	60
12.2	12.5	Point missing	..	..	M.B. II*	61
16.9		Complete, broken, corroded	..	Starkey, <i>Beth Pelet</i> , II, Pl. XLIV, 40	M.B. II*	62
12.7		Complete	Pl. LXIX	Petrie, <i>Gaza</i> , II, Pl. XVIII, 204; p. 8. 'X-XIth Dyn.'	M.B. II*	63
14.9		Complete	..	Together with Tps. 12, 13, 65	M.B. II*	64
11.8		Complete, slightly bent	..	Together with Tps. 12, 13, 64	M.B. II*	65
10.5	11.0	Corroded, bent, point missing	..	..	M.B. II	66

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<i>Tp.</i>	<i>Site</i>	<i>Place</i>	<i>Exc. No.</i>	<i>Mus. No.</i>	<i>Material</i>
<i>Type 8 b. Nail with flat head, incised</i>					
67	Unknown	..	..	M. 285	Bronze
68	Tell el 'Ajjūl	Tomb 1507	880	32.2053	Silver
<i>Type 8 c α. Nail with flat head, regularly ribbed</i>					
69	Tell el 'Ajjūl	Cenotaph 1450	2368	32.1814	Gold
70	Tell el 'Ajjūl	Cenotaph 1450	2369	32.1815	Gold
71	Jericho	Tomb 9 c	898	32.1402	Bronze
72	Jericho	Tomb 31	248	33.1189	Bronze
73	Jericho	Tomb 30 b	158	33.1102	Bronze
74	Tell Fāri'a	Tomb 1018	..	I. 9826	Bronze
75	Tell el 'Ajjūl	Tomb 326	..	33.1808	Bronze
76	Tell el 'Ajjūl	Tomb 263	..	I. 10204	Bronze
77	Tell el 'Ajjūl	Tomb 263 K	..	I. 10206	Bronze
78	Megiddo	Tomb 1100 D	M. 3472	34.2249	Bronze
79	Megiddo	Tomb 1100 C	M. 3486	34.2193	Bronze
80	Megiddo	Tomb 217	M. 615	I. 3505 a	Bronze
81	'Ain Shems	Tomb I E	520	I. 114	Gold
<i>Type 8 c β. Nail with flat head, ribbed with rhythmical change</i>					
82	'Ain Shems	South East Grotto	XXIV, 10	M. 759	Bronze
83	Beisān	'Level of Thothmes III' Room 1232	<u>27-10-139</u> 1232	J. 1039	Gold
84	Tell el 'Ajjūl	Tomb 1968	286 a	35.4146	Bronze
85	Tell el 'Ajjūl	TN 860	1122 A	35.4209	Bronze
<i>Type 8 c γ. Nail with flat head, spirally ribbed</i>					
86	Tell ed Duweir	Tomb 1542	2088	34.2901	Bronze
87	Jericho	Tomb 9 e	992	34.1472	Bronze
88	Jericho	Tomb 9 e	1030	32.1503	Bronze

'TOGGLE-PINS'

Size in cms.		Condition	Illustrated or referred to	Reference and remarks	Period	Tp.
actual	original					
Type 8 b. Nail with flat head, incised						
10.0	10.5	Point missing, bent	Pl. LXIX	..	M.B. II	67
7.5	8.0	Point missing, worn off, broken	Pl. LXIX, Fig. 4, p. 173	Petrie, <i>Gaza</i> , II, Pl. III, 16; p. 7. 'Probably late in the XVIth Dyn.'	L.B. I*	68
Type 8 c a. Nail with flat head, regularly ribbed						
	5.8	Complete	Pl. LXIX	Petrie, <i>Gaza</i> , II, Pl. I, p. 6. Deeply moulded	M.B. II*	69
	4.6	Complete	..	Petrie, <i>Gaza</i> , II, Pl. I, p. 6. Deeply moulded	M.B. II*	70
9.5	12.5	Point missing	..	..	M.B. II*	71
	9.9	Complete	..	..	M.B. II*	72
9.6	12.0	Point missing	..	..	M.B. II*	73
10.0	14.0	Point missing, corroded, bent	..	Starkey, <i>Beth Pelet</i> , II, Pl. XLIII, 34. From the same tomb as Tp. 100	M.B. II*	74
3.7	6.0	Broken 1.5 cm. below eyelet, corroded	..	..	M.B. II*	75
5.5	5.6	Complete, bent, corroded	..	..	M.B. II*	76
3.2	7.0	Broken below eyelet, corroded	..	..	M.B. II*	77
5.8	9.0	Point missing, corroded	..	Deeply moulded	M.-L.B.*	78
	8.0	Complete, corroded, broken	..	Together with that pin fragments of six similar ones were found	M.-L.B. *	79
4.7	6.5	Point missing	..	..	L.B. II*	80
	7.9	Complete	Pl. LXIX	Grant, <i>Beth Shemesh</i> , pp. 196, No. 520, 187 (Fig.)	Late L.B. II*	81
Type 8 c β. Nail with flat head, ribbed with rhythmical change						
	6.3	Complete	..	..	M.B. II	82
	4.8	Complete	Pl. LXIX, p. 175	..	L.B. I	83
8.1	8.2	Point missing, bent	Pl. LXIX	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 454	L.B. I	84
11.8	12.0	Point missing, corroded	..	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 451; drawing not correct	L.B.	85
Type 8 c γ. Nail with flat head, spirally ribbed						
	13.2	Complete	Pl. LXIX	After chemical treatment found to be not of silver, as the find list states	M.B. II*	86
10.2	13.5	Point missing	..	Spiral three times interrupted	M.B. II*	87
13.5	17.0	Fragments, apparently of 3 pins; the one belonging to this type fairly complete	..	..	M.B. II*	88

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<i>Tp.</i>	<i>Site</i>	<i>Place</i>	<i>Exc. No.</i>	<i>Mus. No.</i>	<i>Material</i>
<i>Type 8 c γ. Nail with flat head, spirally ribbed (cont.)</i>					
89	Jericho	Tomb 13 c	1196	32.1692	Bronze
90	Jericho	Tomb 19 c	..	34.1743	Bronze
91	Jericho	Tomb 31	248	33.1194	Bronze
92	Megiddo	Tomb 24	504	I. 3037	Bronze
93	Tell el 'Ajjūl	Tomb 1702	193 d	35.4098	Bronze
94	Tell ed Duweir	Tomb 1502	1757	34.2792	Bronze
95	Tell el 'Ajjūl	TDC 815	1421	35.4285	Bronze
96	Unknown	..	..	M. 282	Bronze
97	Unknown	..	..	M. 294	Bronze
<i>Type 9 a. Knob head, round and pointed</i>					
98	Jericho	Tomb 9 e	990	32.1468	Bronze
99	Jericho	Tomb 19 c	1301	32.1726	Bronze
100	Tell Fāri'a	Tomb 1018	..	I. 9825	Bronze
101	Tell Fāri'a	Tomb 1002	..	I. 7178	Bronze
102	Tell el 'Ajjūl	Tomb 263 A	..	I. 10203/1	Bronze
103	Tell el 'Ajjūl	Tomb 229	..	I. 9845	Bronze
104	Tell el 'Ajjūl	Tomb 435	7 d	35.3777	Silver, with remains of gilding
105	Tell el 'Ajjūl	F 800	964	35.4190	Silver, with remains of gilding

'TOGGLE-PINS'

Size in cms.		Condition	Illustrated or referred to	Reference and remarks	Period	Tp.
actual	original					
Type 8 c γ, Nail with flat head, spirally ribbed (cont.)						
13.4		Complete; corroded and broken	Fig. 11, p. 187	The only specimen in which a ring is still attached to the eyelet	M.B. II*	89
6.5	13.0	Strongly bent, broken, part of shank missing	..	Spiral several times interrupted. Garstang, <i>Jericho</i> , AAA, XX, p. 7, Fig. 2	M.B. II*	90
7.0	15.0	Broken at eyelet, lower part missing	..	..	M.B. II*	91
15.8	16.0	Complete, bent	..	..	M.B. II*	92
14.6	22.0	Point missing	..	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 496	M.B. II*	93
11.4	15.0	Bent; point and part of eyelet missing	..	..	M.B. II*	94
16.0	16.1	Complete, bent	..	Drawing in the find list differing, though the number corresponds	M.B. II*	95
12.6	12.7	Complete, bent	..	..	M.B. II	96
15.2		Complete, bent	..	Very irregular spiral	M.B. II	97

Type 9 a. Knob head, round and pointed

6.3	15-16	Broken off below eyelet	Pl. LXX	Globular head, ribbed; shank ribbed with rhythmical change. Extremely small, round eyelet. Garstang, <i>Jericho</i> , AAA, XIX, p. 47, Fig. 10	M.B. II*	98
14.6		Complete	Pl. LXX	Garstang, <i>Jericho</i> , AAA, XX, p. 7, Fig. 2. Globular head, star-like in section (8 rays). Type found in Syria (Morgan, <i>La préhistoire orientale</i> , III, p. 239; <i>Syria</i> , XIII, Pl. XIII). Very long point	M.B. II*	99
12.7	20.0	Point missing, corroded	..	Pointed, ribbed knob head, shank not recognizable. Starkey, <i>Beth Pelet</i> , II, Pl. XLIII, 28. From the same tomb as Tp. 74	M.B. II*	100
10.0		Complete, corroded, bent	..	Globular head, regularly ribbed shank. Starkey, <i>Beth Pelet</i> , II, Pl. XLIV, 44	M.B. II*	101
4.1		Complete, broken, corroded	..	Petrie, <i>Gaza</i> , I, Pl. XXI, 94 (probably); p. 8	M.B. II*	102
5.3	7.5	Point missing, corroded	..	Petrie, <i>Gaza</i> , I, Pl. XIX, 44, p. 8. Probably ribbed shank	Late M.B. II*	103
4.0	5.5	Point missing	Pl. LXX	As the following number	M.-L.B.*	104
2.8	5.5	Broken off within eyelet	..	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 440	M.-L.B.	105

E. HENSCHEL-SIMON

<i>Tp.</i>	<i>Site</i>	<i>Place</i>	<i>Exc. No.</i>	<i>Mus. No.</i>	<i>Material</i>
<i>Type 9 b. Knob head, vase-shaped</i>					
106	Jericho	Tomb 9 <i>e</i>	992	32.1471	Bronze
107	Jericho	Tomb 19 <i>c</i>	..	32.1742	Bronze
108	Jericho	Tomb 30 <i>b</i>	158	33.1104	Bronze
109	Jericho	Tomb 30 <i>b</i>	158	33.1100	Bronze
110	Jericho	Tomb 31	248	33.1193	Bronze
111	Jericho	Tomb 31 A	248	33.1196	Bronze
112	Tell el 'Ajjūl	Tomb 101	..	I. 10180	Bronze
113	Jericho	Tomb 3	42	32.1047	Bronze
114	Tell el 'Ajjūl	Tomb 1551	151 <i>v</i>	35.4070	Bronze
115	Jericho	Tomb 5 D	..	32.1173	Bronze
<i>Type 9 c. With attached bead</i>					
116	Tell el 'Ajjūl	Tomb H 771	92 <i>f</i>	35.3922	Gold
117	Tell el 'Ajjūl	Tomb 456	22 <i>i</i>	35.3791	Gold, agate head, gold cap
118	Tell el 'Ajjūl	Tomb 1240 B	75 <i>c</i>	35.3839	Gold
119	Tell el 'Ajjūl	Group 1312	85 <i>d</i>	35.3881	Gold

‘TOGGLE-PINS’

Size in cms.		Condition	Illustrated or referred to	Reference and remarks	Period	Tp.
actual	original					
Type 9 b. Knob head, vase-shaped						
10.7	12.0	Point missing, bent	..	Shank spiral-ribbed	M.B. II*	106
5.5	7.0	Point missing, corroded	..	Shank spiral-ribbed	M.B. II*	107
9.0	11.0	Point missing, corroded	..	Shank ribbed, with rhythmical change	M.B. II*	108
12.5		Complete, corroded	Pl. LXX	Shank ribbed, with rhythmical change	M.B. II*	109
6.5	9.0	Point missing	Pl. LXX	Shank fairly regularly ribbed	M.B. II	110
7.5	15-16	Broken, point missing, corroded	..	Shank irregularly ribbed. Found together with fragments of another pin of the same type and of two nail-headed toggle-pins, included in the same number	M.B. II*	111
9.5	17.0	Corroded, point missing	..	Shank ribbed with rhythmical change	M.B. II*	112
14.4		Complete, corroded, broken, bent	..	Plain shank ?	M.B. II*	113
8.0	16.0	Point missing, badly corroded, broken	..	Shank regularly ribbed. The point drawn in Petrie, <i>Gaza</i> , IV, Pl. XXI, 225, does not belong to it	M.B. II*	114
12.7		Complete, broken, corroded	..	Very thin, shank spiral-ribbed	M.-L.B.*	115
Type 9 c. With attached bead						
4.9		Complete, bead and cap missing	..	Petrie, <i>Gaza</i> , IV, Pl. XXII, 251; p. 9. The tomb is dated by Petrie to the XIIth Dyn. on account of some stonework. Shank would belong to Type 6 a.	M.B. II	116
7.1		Complete	Pl. LXX	Petrie, <i>Gaza</i> , IV, Pl. XVIII, 110; p. 8. Twisted shank (Type 7)	Late M.B. II or early L.B. I	117
10.2		Complete, bead missing	Pl. LXX	Petrie, <i>Gaza</i> , IV, Pl. XVIII, 95; p. 8. The cap is removable so as to allow the bead to be changed. Shank formed out of vase-shaped units alternating with lines of raised dots. For the twisted ring between the (removable) cap and the proper pin, see Tp. 123. Shank Type 6 b	Late M.B. II or early L.B. I	118
7.3		Complete, bead and cap missing	..	Petrie, <i>Gaza</i> , IV, Pl. XX, 138; p. 8. Hoard 1312 does not necessarily belong to one period. Shank as Tp. 118	L.B. I	119

E. HENSCHHEL-SIMON

<i>Tp.</i>	<i>Site</i>	<i>Place</i>	<i>Exc. No.</i>	<i>Mus. No.</i>	<i>Material</i>
Type 9 c. <i>With attached bead (cont.)</i>					
120	Tell el 'Ajjūl	Tomb 1203	49 t	35.3811	Gold
121	Tell el 'Ajjūl	Group 1299	78 d d	35.3856	Electrum
122	Tell el 'Ajjūl	Group 1299	78 b b	35.3855	Electrum
123	Tell el 'Ajjūl	Group 1299	78 f f	35.3857	Electrum, amethyst bead, gold ring and cap
Type 10. <i>Hollow pin</i>					
124	Megiddo	Tomb 62	M. 21	I. 3410	Gold
125	Megiddo	Tomb 62	M. 18	I. 3407	Silver
Type 11. <i>Stake</i>					
126	Tell en Naşbe	Tomb 54	2660	35.3147	Bronze
127	Tell en Naşbe	Tomb 54	2658	35.3146	Bronze
128	Tell en Naşbe	Tomb 32	2215	32.2610	Bronze
129	Tell en Naşbe	Tomb 32	2245	32.2618	Bronze
130	Beitin	..	239	35.4421	Bronze
131	Beit Sāhūr	From a tomb	..	M. 857	Bronze
132	Beit Sāhūr	From a tomb	..	M. 858	Bronze
Type 12. <i>Mushroom head</i>					
133	Tell Fāri'a	Tomb 843	..	I. 4432	Bronze
134	Beit Sāhūr	From a tomb	..	M. 855	Bronze
135	Wādi Muḥtarja	From a tomb	..	36.1854	Bronze

‘TOGGLE-PINS’

Size in cms.		Condition	Illustrated or referred to	Reference and remarks	Period	Tp.
actual	original					
Type 9 c. With attached bead (cont.)						
7.1		Complete, bead and cap missing	..	For the shank compare Marshall, <i>Br. Mus. Jewellery</i> , Pl. IV, Nos. 546, 553, 556, but the 'Ajjül pins are better worked Petrie, <i>Gaza</i> , IV, Pl. XVI, 57; p. 7. Shank: fluted beads alternating with two disks	L.B. I	120
5.7		Complete, bead and cap missing	Pl. LXX, p. 175	Petrie, <i>Gaza</i> , IV, Pl. XIV, 22; p. 6. For the rings soldered on the eyelet cf. Marshall, <i>Br. Mus. Jewellery</i> , Pl. IV, 546, and the mould Pl. LXX, from 'Ain Shems, where the rings, however, are cast together with the pin	..	121
4.0	4.1	Point missing, bead and cap missing	..	Petrie, <i>Gaza</i> , IV, Pl. XIV, 20; p. 6. Shank Type 6 b	M.B. I	122
	9.2	Complete	Pl. LXX	Petrie, <i>Gaza</i> , IV, Pl. XIV, 24; p. 6. Shank Type 6 a	L.B. I	123

Type 10. *Hollow pin*

8.0		Complete	Pl. LXXI	Formed out of gold foil, hole pierced	L.B.-E.I.*	124
6.2	6.8	Complete, bent	..	Formed out of silver foil, hole pierced	L.B.-E.I.	125

Type 11. *Stake*

14.5	14.7	Point missing	Pl. LXXI	..	Iron I*	126
	11.7	Complete	Pl. LXXI,	..	Iron I*	127
10.8	12.0	Point missing, broken, corroded	Fig. 12 c, p. 188	Apparently ring incisions	Iron I*	128
12.9	13.5	Point missing, bent, corroded	..	Ring incisions in groups of three	Iron I*	129
	11.1	Complete	..	Ring incisions in groups of three	Iron I*	130
	11.7	Complete	..	Ring incisions in groups of two ?	Iron I*	131
	12.3	Complete	..	Kind of herring-bone incisions	Iron I*	132

Type 12. *Mushroom head*

14.4		Complete	Pl. LXXI	Petrie, <i>Beth Pelet</i> , I, Pl. XXII, 221. With ring and herring-bone incisions	Iron I*	133
15.9		Complete	..	Ring incisions	Iron I*	134
13.5		Complete	..	Plain	..	135

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<i>Tp.</i>	<i>Site</i>	<i>Place</i>	<i>Exc. No.</i>	<i>Mus. No.</i>	<i>Material</i>
Type 13. <i>Baluster</i>					
136	Tell en Naşbe	Tomb 54	2654	35.3147	Bronze
137	Tell en Naşbe	Dump refill	2880	35.3227	Bronze
138	Tell Fāri'a	Cemetery 100, probably tomb 103	..	M. 1179	Bronze
Type 14. <i>Particular shapes</i>					
139	Tell Beit Mirsim	Stratum D	1584	I. 9027	Bone
140	Tell en Naşbe	Tomb 32	2232	32.2617	Bronze
141	Beit Sāhūr	..	..	M. 856	Bronze
Type 15. <i>Undefinable shapes and fragments</i>					
142	Tell el 'Ajjūl	Tomb 407	..	I. 10217	Bronze
143	Tell el 'Ajjūl	Tomb 263 B	..	I. 10205	Bronze
144	Tell el 'Ajjūl	Tomb 263 L	..	I. 10208	Bronze
145	Tell el 'Ajjūl	Tomb 491	35 K	35.3796	Bronze
146	Tell el 'Ajjūl	Tomb 412	..	I. 10221	Bronze
147	Tell el 'Ajjūl	Tomb 1214	59 n	35.3830	Bronze
148	Beisān	CN 303	31-10-163 A	32.270	Bronze
149	Beisān	CN 303	31-10-163 A2	32.271	Bronze
150	Tell ed Duweir	Tomb 129	717	33.1952	Bronze
151	Tell ed Duweir	Tomb 153	2602 A	34.2950	Bronze
152	Tell Fāri'a	Tomb 559	..	I. 4384	Bronze
153	Tell Fāri'a	Tomb 559 E	..	I. 4383	Bronze
154	Tell Fāri'a	Tomb 1024	..	I. 7184	Bronze
155	Tell Fāri'a	Tomb 582	..	I. 4415	Bronze
156	Jericho	Tomb 9 d	..	32.1537	Bronze
157	Jericho	Tomb 31	248	33.1191	Bronze
158	Jericho	Tomb 31	248	33.1195	Bronze
159	Jericho	Tomb 19 b	1284	32.1710	Bronze
160	Jericho	Tomb 43	494	35.1712	Bronze

'TOGGLE-PINS'

Size in cms.		Condition	Illustrated or referred to	Reference and remarks	Period	Tp.
actual	original					
Type 13. <i>Baluster</i>						
10.2	12.5	Point missing	..	..	Iron I*	136
12.0	12.1	Point missing	Pl. LXXI	..	Iron I	137
12.0	14-15	Point missing	Pl. LXXI	Petrie, <i>Beth Pelet</i> , I, Pl. XLII, 336 (Cemetery 100)	Iron I*	138
Type 14. <i>Particular shapes</i>						
4.2		Complete	Fig. 10, p. 187	..	M.B. II*	139
6.9	7.1	Point missing	Fig. 12a, p. 187	..	E.I.*	140
13.4	13.5	Point missing	Fig. 12b, p. 188	..	E.I.*	141
Type 15. <i>Undefinable shapes and fragments</i>						
..		Corroded fragments	..	Probably belonging to two pins	M.B. II*	142
4.2	5.0	Corroded, point missing	..	Probably ribbed	M.B. II*	143
6.5	?	Corroded, point missing	..	..	M.B. II*	144
10.5	?	Corroded, top missing (?)	..	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 479	M.B. II*	145
..		Corroded fragments	..	..	M.B. II*	146
12.4	20.0	Corroded, point missing	..	Not silver as said by Sir Flinders Petrie	M.B. II*	147
..		Corroded fragments	..	Probably ribbed	M.B. II*	148
..		Corroded fragments	..	Nail head	M.B. II*	149
11.6	?	Corroded, top (?) and point missing	..	..	M.B. II*	150
..		Corroded; fragments of many pins	..	..	M.B. II*	151
..		Corroded fragments	..	..	M.B. II*	152
17.2	20.0	Corroded, point missing	..	Petrie, <i>Beth Pelet</i> , I, Pl. IX, 50	M.B. II*	153
..		Corroded fragments	..	..	M.B. II*	154
15.7	17.0	Corroded, top and point missing	..	..	M.B. II*	155
4.7	9.0	Corroded, point missing, broken	..	Possibly nail-type	M.B. II*	156
9.5	14-15	Shank above eyelet broken off	..	..	M.B. II*	157
9.2	16.0	Corroded, point missing	..	Nail-type	M.B. II*	158
7.0	11.0	Part above eyelet missing	..	Double pointed type ?	M.B. II*	159
17.5	17.7	Complete, broken bent, corroded	..	Nail head ?	M.B. II*	160

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<i>Tp.</i>	<i>Site</i>	<i>Place</i>	<i>Exc. No.</i>	<i>Mus. No.</i>	<i>Material</i>
Type 15. <i>Undefinable shapes and fragments (cont.)</i>					
161	Jericho	Tomb 5 <i>g</i>	657	32.1261	Bronze
162	Megiddo	Tomb 24	508-11	I. 3041-4	Bronze
163	Tell Beit Mirsim	D Level	2348	32.2764	'Copper'
164	Tell el 'Ajjūl	Tomb 1307	82 <i>f</i>	35.3877	Silver
165	Jericho	Tomb 5 <i>d</i>	376	32.1309	Bronze
166	Megiddo	Tomb 1100 D	3413	34.2250	Bronze
167	Megiddo	Tomb 1100 C	M. 3478-82	34.2185-9	Bronze
168	Megiddo	Tomb 1145 B	M. 3616	34.2408	Bronze
169	Megiddo	Tomb 1145	M. 3618	34.2409	Bronze
170	Megiddo	Tomb 1178	M. 3611	34.2418	Bronze
171	Jericho	Tomb 23 <i>a</i>	..	32.1765 <i>b</i>	Bronze
172	Tell Beit Mirsim	Stratum C	1339	I. 8985	Bronze
173	Tell Beit Mirsim	..	1666	32.2684	'Copper'
174	Tell el 'Ajjūl	Tomb 616	..	I. 10229	Bronze
175	Beisān	..	..	36.1710	Bronze
176	Tell Fāri'a	Tomb 936	..	I. 7129	Bronze
177	Tell Fāri'a	Tomb 936	..	I. 7130	Bronze

'TOGGLE-PINS'

Size in cms.		Condition	Illustrated or referred to	Reference and remarks	Period	Tp.
actual	original					
Type 15. <i>Undefinable shapes and fragments (cont.)</i>						
6.0	9-10	Top and point missing	..	..	M.B. II*	161
..	..	Corroded fragments from four pins	..	..	M.B. II*	162
..	..	Corroded, broken	..	..	M.B. II*	163
3.9	4.0	Point missing, worn off	..	Petrie, <i>Gaza</i> , IV, Pl. XXXIII, 469. Drawing not convincing, a pattern not recognizable	M.-L.B.*	164
4.6 and 3.3	6.0 and 4.5	Fragments of at least two pins	..	Two of them possibly ribbed	M.-L.B.*	165
..	..	Corroded, very fragmentary	..	Probably deeply moulded	M.-L.B.*	166
..	..	Corroded, fragments of five pins	..	Probably all deeply moulded	M.-L.B.*	167
One: 3.8	..	Fragments of two pins, corroded, broken	..	One very tiny, possibly complete	M.-L.B.*	168
3.5	5.0	Corroded, point missing	..	..	M.-L.B.*	169
5.0	?	Lower part of very thin pin	..	..	M.-L.B.*	170
..	..	Corroded fragments of two pins	..	..	L.B. I*	171
12.7	?	Top and point missing	..	..	L.B.*	172
6.4	9.0	Corroded, point missing, bent	..	..	?	173
..	..	Corroded fragments	..	..	?	174
..	..	Corroded fragments of at least ten pins	..	From 1925 excavation. All deeply moulded	L.B. I or II	175
11.2	16.0	Corroded, point missing	..	..	L.B. II*	176
6.5	?	Completely corroded	..	..	L.B. II*	177

NOTE ON A MOSAIC INSCRIPTION IN THE CHURCH OF THE NATIVITY

EVERY ONE who has visited the Church of the Nativity in Bethlehem will recall the fragments of twelfth-century mosaic work that have survived on the north and south walls of the central nave.

These mosaics were originally arranged in three horizontal registers. The uppermost register consisted in a series of angels occupying the spaces between the windows; it was defined above and below by a floral scroll border. The middle register contained architectural designs symbolizing the chief general and provincial councils of the Church, alternating with panels of fantastic foliage. In the lowest register on each wall was a series of half-length figures representing the ancestors of Christ, according to the genealogy given by St. Matthew on the south wall and according to that of St. Luke on the north. It is with the genealogy of St. Matthew, of which seven figures have survived, that this note is concerned.

St. Matthew in the first chapter of his Gospel traces the ancestry of our Lord through Joseph and David to Abraham. The seven immediate ancestors of Joseph are Jacob, Mathan, Eleazar, Eliud, Achim, Sadoch, and Azor. It is these that have survived on the south wall of the nave at Bethlehem: their names are written in Latin letters—black on a gold ground—on the right hand side of each of the figures, close to the head. The head of Jacob, the last ancestor before Joseph, comes at the east end of the line and the mosaic continues for 60 cm. before it breaks off and is replaced by white plaster (Pl. LXXII, 1). The end of the wall is another 3 metres to the east.

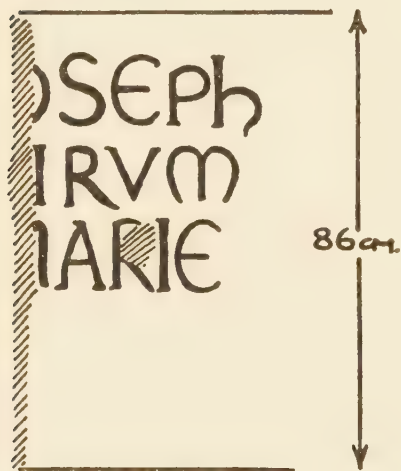


FIG. 1

Published reproductions¹ of this part of the mosaic have shown the last 60 cm. of it as a blank, or composed of plain gold tesserae. This is not correct. A close examination of the space between the bust of Jacob and the edge of the fragment reveals the fact that it contains the letters shown in Fig. 1. These, of course, represent the words JOSEPH VIRUM MARIAE written

¹ de Vogüé, *Les Églises de la Terre Sainte*, 1860, Pl. III; Harvey and Lethaby, *The Church of the Nativity at Bethlehem*, 1910, Pl. II; PP. Vincent and Abel, *Bethléem. Le Sanctuaire de la Nativité*, 1914, Pl. XX, 2.



1. Lower part of mosaic, east end of south wall.



2. Mosaic inscription at A.

MOSAIC INSCRIPTION, CHURCH OF THE NATIVITY

one above the other, the first letter being lost in each case, and the final diphthong of *MARIAE* being written, as was commonly done in the period, with a simple letter *E* (Pl. LXXII, 2).

It is clear from these words that the genealogy did not, as has been commonly assumed, end in the figure of Jacob but was logically completed with the portraits of St. Joseph and the Virgin Mary, the secular father and the mother of our Lord. The space to be filled, corresponding as it does with the whole width of the Council of Nicaea, is too wide to be occupied by St. Joseph alone, but requires at least two figures on the same scale as the rest. That the Blessed Virgin should be depicted in conjunction with St. Joseph is explained by Matthew i. 16:

'Jacob autem genuit Joseph virum Mariae, de qua natus est Jesus, qui vocatur Christus.' This verse gives the context of the surviving letters on the mosaic, and shows that they were balanced on the left-hand side by the words 'Jacob autem genuit'.

It is impossible to read the surviving letters with the naked eye owing to the discoloration of the surrounding field. Their form is the same as that of the much more legible inscriptions appearing beside the other figures.

R. W. HAMILTON.

EXCAVATIONS IN PALESTINE, 1935-6¹

'*Auja el Hafir* see *QSt.*, 1936, pp. 216-20; *JPOS*, pp. 279-85

Bethlehem

(Wellcome Archaeological Research Expedition to the Near East, Geological Section; Field-Director, Miss E. W. Gardner)

THE excavation of the Bethlehem site was continued from 13 March to 28 April 1936, on the same lines as last year. The winter's rains and summer suns had caused a good deal of cracking and this necessitated the cutting back of the sides of the pit in all directions. In the course of this work the limit of the bone-bearing gravel deposit was found on the south and the east. It appears to lie against and in places be mixed with a limestone scree or breccia made up of blocks of local rock of all sizes and quite unrounded. What this deposit rests on or against remains to be discovered another season.

Numerous fragments of bone were found, but owing to their condition they were not worth preserving. It is, however, satisfactory that two mammals new to the deposit were recovered, bringing the present fauna up to five species.

The palaeontological work was again carried out by Miss D. M. A. Bate of the British Museum.

Isbeita see '*Auja el Hafir*

Jericho

(Sir Charles Marston Expedition; directed by Professor John Garstang, Institute of Archaeology, University of Liverpool)

DURING the winter the final campaign at Jericho opened over a much wider field the Neolithic floors and prehistoric levels revealed in the last weeks of the previous season. While the general conclusions already indicated were confirmed, a great deal of welcome information and detail was added to our knowledge of this site. Five building levels of the Early Bronze Age were separated and a close record was kept of their stratified deposits. The uppermost Neolithic levels (hitherto called 'Chalcolithic') were also separated from those above and below, and a complete sequence of flints and ceramic types was established. In the lowest pottery level a beehive-like model of a house and, below the pottery levels, a *megaron*-like building were instructive discoveries. The beginning of the 'Bronze Age' (Stage VII of Megiddo and

¹ Continued from Vol. V, pp. 194-210.

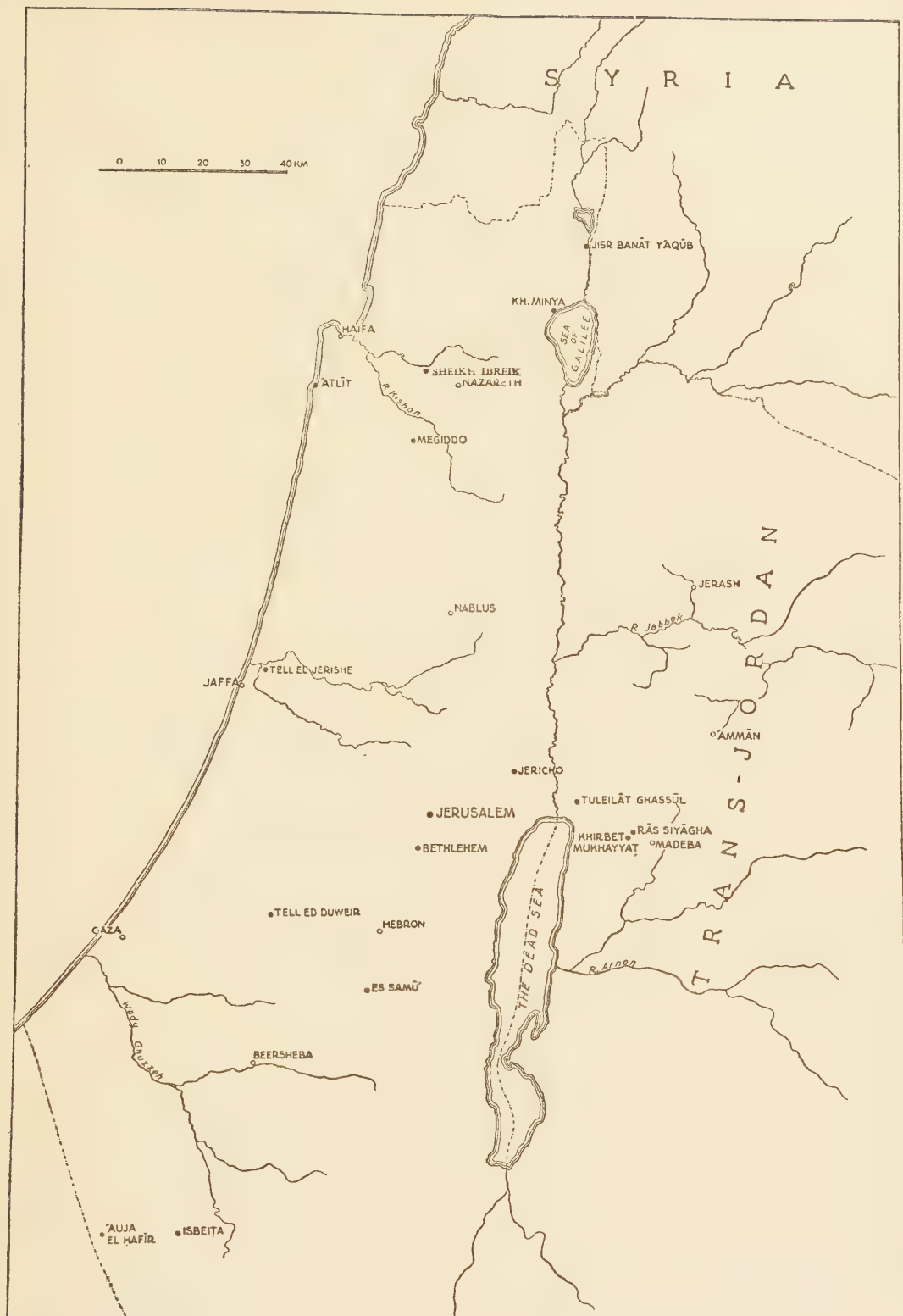


FIG. 1.
(Sites of excavations shown thus •)

EXCAVATIONS IN PALESTINE, 1935-6

Level XVI of Beisān) was shown to synchronize with the rise of Dynastic Egypt. To this level belongs a small shrine of Babylonian character.

The excavation reports continue to be published in the *Annals of Archaeology*.

Jerusalem. The Citadel

(Department of Antiquities)

EXCAVATIONS were resumed this spring with the principal object of examining the stratification against the ancient fortifications discovered in the courtyard last year (*Quarterly*, Vol. V, pp. 127 ff.). As a result it now appears that the oldest part of the line is the ruined 'Corner' tower and the broken curtain-wall adjoining it on the north-east (*ibid.*, p. 129 and Pls. LXIX, LXXII, 2, 3); while the masonry previously described as original (*ibid.*, pp. 127-8 and Pls. LXXII, 1, LXXIII, 1) must now be regarded as secondary to this, and probably contemporary with the basement of the 'Tower of David', rather than earlier. On deepening the soundings outside and inside the curtain-wall between these two towers there should emerge some evidence for dating the two main periods of building.

The probable continuation of the line outside the courtyard on the south has also been explored by clearing part of the fosse down to the rock. East of the Minaret tower a rock-cut trench has been traced which seems to have been made for the foundations of a big wall. As it bears closely on the south-east angle of the 'Corner' tower, it may have belonged to a line of fortifications which included that tower. In that case it must have been superseded by the more westerly line represented by the reconstructed curtain-wall and tower south of the 'Corner' tower (*ibid.*, p. 130 and Pl. LXX), and by the present city-wall farther south (*ibid.*, Pl. LXXI).

At the close of another season's work it is hoped to publish a full report on these ancient fortifications, together with the secondary remains, Roman, Byzantine, Arab, Crusader, or later, which have come to light within the Mamlūk and Turkish castle since excavations were begun in 1934.

Ḥisr Banāt Ya'qūb

(Hebrew University, Jerusalem; directed by M. Stekelis and L. Picard, with the collaboration of Miss D. M. A. Bate, British Museum (Natural History))

THROUGH the kindness of Dr. G. Haas, of the Zoological Department, Hebrew University, the excavators were informed in January 1936 of the discovery of elephant remains in the Ḥuleh district. After inquiry, they received from Mr. N. Horoviz, of Yesōd ha Ma'ala, a box containing the remains of two molars and one tusk belonging to an elephant.

The work started in March 1936 with soundings below the old bridge

Jisr Banāt Ya'qūb and in the river-bed itself. Work and results have, for various reasons, been fragmentary, but the excavators have thus far succeeded in distinguishing three layers. The lowest, provisionally named *a*, is the river-bed itself, which is filled with heaps of boulders. Whether these boulders are *in situ* or not it is not, at present, possible to be certain. From this bed was obtained a fragment of a lower jaw, some fragments of molars and tusks, broken and worked bones—all belonging to an elephant—and hand-axes of basalt of a Lower Acheulean or Upper Abbevilean type. These beds were formerly covered by the waters of the Jordan.

Layer *β* consists of dark-grey clay, exposed on the right bank bordering on the lowest level of the river. Its thickness was exposed to about half a metre. This bed had again been covered with water. It included a fauna of shells, which, besides characteristic forms known from Lake Tiberias or the Huleh, yielded the most interesting genus *Vivipara*.¹ Fragments of tusks and molars of *Vertebrata* were again recorded, further bones of *Cervidae* and *Equidae*. Flint implements, hand-axes and flakes of Upper Acheulean type were found there.

Layer *γ*, superincumbent on layer *β*, represents a thick gravel-bed which has been only partly covered by the Jordan river. On this level some flints of Levallois-Mousterian type were found, mixed with those of Upper Palaeolithic. The upper part of layer *γ* is totally covered by alluvial debris and soil; the thickness of this stratum could not therefore be measured.

Miss D. M. A. Bate, who has in hand the material which was first received from Mr. Horoviz, believes that the elephant remains belong to *Elephas trogontherii* Pohlig, which is regarded as a distinct Pleistocene fossil.

Although so far only the beginnings of an investigation could be made, the material obtained shows implements and fauna of the highest importance for the chronology of the Pleistocene and its relation to the Palaeolithic culture of Palestine.

Khirbet Minya

(Oriental Institute of the Goerres-Gesellschaft; directed by Dr. A. M. Schneider with the assistance of Dr. G. Martiny)

THE excavations at Khirbet Minya were begun by Dr. Mader in 1932;² they were continued during March and April 1936 and completed so far as to determine the ground-plan of the general construction as well as the later reconstructions of parts of the building.

¹ *Vivipara* have thus far not been recorded in Pleistocene beds nor in the recent lakes and rivers of Palestine.

² *Forschungen und Fortschritte*, 1932, p. 229; *Journal of the Palestine Oriental Society*, 1933, p. 209.

Dr. Mader has found a castle-like building, 70 m. square, with a monumental entrance on the eastern side and a wall with nine towers. In 1936 the excavators cleared the inner face of the wall in order to find adjoining walls, if any; and also the group of buildings at the western side of the wall and the gate entrance. Finally, a trial ditch 2 m. broad was dug in a east-west direction through the whole of the ruin.

The entrance gate consists of a square domed room, 11 m. high, with richly profiled niches at both sides of the gateway. The dome rests on pendentives; set above a frieze decorated with an acanthus ornament, it is constructed with dressed stones so arranged as to form a geometrical design; some of the stones are also ornamented. The hemispherical domes of the two niches were similarly dressed.

This gate, flanked by two semicircular towers, leads to a large courtyard, paved with big basalt flagstones. The only group of buildings within this enclosure was a symmetrical construction close to the western side of the wall. It consists of two large *liwan* halls, each of which is flanked by two groups of several rooms. A square domed room is on the northern side of these, a rectangular room on the southern side. In front of the rooms a staircase leads to the flat roof.

This building was destroyed by an earthquake and remained in ruins for a considerable time.

Monochrome fragments of smooth ware (c. fourth-fifth century A.D.), a lamp dating from the sixth century and a so-called pilgrim's bottle, were found in the lowest level. About 2 m. above the first level begins a second stratum, separated from the first by fine blown sand mixed with a thick deposit of ashes. In the second layer appeared much 'Copto-Arabic' ware of the eighth to the tenth century. During this period the entrance and the buildings at the western side of the courtyard were put into some state of repair and other living-rooms constructed along the enclosing wall. In a still later period the entrance was again elevated. In this layer Byzantine potsherds of the eleventh-twelfth century were found, together with glazed Syrian, Mesopotamian, and Egyptian ware. The last layer contained green-glazed ware of daily use in the seventeenth century.

Dr. Mader was of the opinion that the building was a Roman fort of the second or third century A.D. For this supposition he relied partly on the excellent technique of the dressed stones and especially on the ground-plan of the building, several examples of which occur in forts of the *limes Arabicus* (e.g. el Qaşal, Odruh, el Lejjün, &c.). However, this year's excavations have shown that this obvious explanation could not be maintained. There

are three principal reasons against it: (1) The outer gate of the entrance could not be closed. Thus, an enemy could enter the domed room directly and break it open without being prevented by the defenders. Gates of forts are not planned in this way; indeed such a magnificent entrance is meaningless in a building constructed for purely practical purposes. (2) The division of the interior is not that of a Roman fort. (3) The group of buildings in the western side of the wall has its nearest parallels in the Parthian palaces of Ḥaṭra of the second century A.D.¹ The excavators therefore concluded that this building is not a fort but a palace.

The pottery does not help in fixing an exact date but gives only a general framework. The form of the acanthus frieze resembles rather that of Mshattā than the late Roman ornament of the synagogue of Tell Ḥūm near by (second half of the fourth century A.D.).²

This building occupies, therefore, a remarkable transitional position between the Late Roman and Early Islamic periods. With all due reserve one may perhaps assign it to the beginning of the fifth century A.D.

Khirbet Mukhaiyyaṭ

(Custodia di Terra Santa)

KHIRBET MUKHAIYYAṬ is situated half-way between Madaba and Siyāgha (Nebo) in Trans-Jordan. Among the ruins of this ancient site five chambers have been identified. Few architectural details have survived the ravages of time, but in three of the churches some interesting mosaics still exist. Invocations addressed to St. Lot and Procopius in one church, to St. George in another, and the mention of the priest John in the third, suggest convenient titles for these three churches.

For the mosaic in the church of St. Lot and Procopius, situated at the north-eastern end of the Mukhaiyyaṭ ridge, see Lemaire in *Revue Biblique*, XLIII (1934), pp. 385-401. The walls of the Arab house mentioned there rested on the old foundations of the church, which are built on bedrock two to three metres below the floor level; the apse flanked by two rooms remained outside the eastern wall of the late building. In the northern room there is a cistern; similar cisterns exist inside the other two churches. In a restoration carried out in 1935 the above-mentioned apse and rooms were included within the new building, and the walls which had encroached on the mosaic floor were removed.

The mosaic pavement of the church built by the priest John is still preserved

¹ Andrae, W., *Hatra*, II, Pl. VII (Wiss. Veröff. d. D. Orient-Ges., XI).

² As correctly assigned by Weigand in *Jahrb. f. Kunstwissenschaft*, 1924, p. 169.

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inside a recent Arab building on the east slope of Mukhaiyyaṭ directly below the church of St. Lot and Procopius. The building is still in use and the condition of the floor is such that the existence of a mosaic pavement would scarcely be suspected. Patient cleaning brought to light two inscriptions in 1933; part of one of these inscriptions hidden by a wall was recovered in 1935 and numerous other beautiful designs were discovered. The central field in the nave was subdivided into medallions by acanthus leaves. The central figure in the second row from the east is Gē (the Earth); the figures facing the earth bear fruits in their hands; above the left figure a lion can be recognized, below this same figure is a lamb, then a hunter and porcupine. Below the hunter is a representation of a woman with a basket of fruit; above the central field a short inscription is flanked by peacocks and other birds; numerous other designs in the aisles await further cleaning.

St. George is on the acropolis hill in the centre of Mukhaiyyaṭ. The Arab house which had been built on the foundations of the church was deserted and ruined; but here too the mosaic pavement is completely preserved. In the central field of the nave acanthus leaves form medallions enclosing harvest, vintage, and hunting scenes very similar to those in the other two churches. Among the numerous panels of the sanctuary, sacristies, intercolumniations, and aisles there are six with inscriptions in Greek bringing the total number of Greek mosaic inscriptions at Mukhaiyyaṭ to twelve. Dates are indicated merely by indictons and months or by reference to ecclesiastical and civil authorities. No era is given. The bishop John occurs in all three churches; many benefactors of St. George's are identical with those of St. Lot and Procopius. These indications serve to link up the history of the different churches and should eventually help to solve the history of the place. The bishop Elias mentioned at St. George's was unknown before 1935. New are also the names of the archdeacon Saola and the three mosaic artists: Naouma, Cyriacus, and Thomas. Other interesting features of the church are the quatrefoil reliquary in the surface of the large stone beneath the altar and the bishop's chair in the apse. For more details regarding Mukhaiyyaṭ and other Byzantine remains in the Nebo region see P. Bellarmino Bagatti, O.F.M., in *Rivista di archeologia cristiana*, XIII (1936), pp. 129-41.

Megiddo

(Oriental Institute of the University of Chicago; directed by Gordon Loud)

EXCAVATIONS were resumed in mid-October 1935 and continued without interruption until 1 May 1936. By means of three large sounding trenches spaced at nearly equal intervals around the tell and carried down through

several levels it was soon established that the southern section of the city is consistently devoted to poorer private houses, that the eastern part is composed of minor public buildings and houses of better quality, and that the major public buildings are grouped around the city gates located at the northern side of the tell. The eastern and northern soundings were subsequently expanded into large digging areas.

Due to the complete lack of conclusively stratified inscriptional material, the dating of the strata is momentarily largely based on the pottery which has been gratifyingly consistent in the three areas to which the season was confined. Stratum XIII, of which the meagre evidence of but one trench is yet available, appears to fall into the overlapping E.-M.B. period. Strata XII, XI, and X, cover practically the entire M.B. period from the end of the XIIth to the beginning of the XVIIIth dynasty. Stratum IX, with its distinctive pottery of duochrome decoration consisting of fishes, 'Amorite' birds, 'Union Jacks,' friezes of cartwheels, and ingenious combinations of geometric designs along with late Hyksos jewellery and scarabs, and with true M.B. II wares, may be considered as bringing to a close the M.B. period with the capture of the city by Thutmose III. Stratigraphically X and IX are closely related, the latter being a rebuilding with a partial re-use of the former. True L.B. I pottery with no M.B. carry-over is characteristic of stratum VIII which covers the long period from Thutmose III to the end of the XVIIIth dynasty. Stratum VII is closely linked to stratum VIII, its buildings often employing walls of the earlier city. The pottery is characteristic L.B. II, the indigenous forms showing a steady degeneration of the stratum VIII decorative motives. True 'Philistine' ware, peculiarly scarce in later levels, is found along with plentiful imports of Cypriote and Late Helladic III wares. Stratum VI abounds with E.I. pottery such as is found all over Palestine at this period. It may be assigned to the twelfth century. Stratum V falls within the latter half of the eleventh and the early part of the tenth century, while stratum IV may be termed 'Solomonic'.

Of the excavated buildings may be noted a single-chambered temple originating in stratum IX but completely rebuilt in strata VIII and VII. It is in the east area, and may well be assigned to the worship of Reshef from the number of figurines found within and about it. A small stratum V shrine contained a stone altar and offering-stands in their original positions. A stratum VI house of massive scale included a square stair-well with stairs about a central column ascending to the roof or second storey. An extensive stratum VIII building immediately beside the city gate requires further excavation before identification is possible.

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Superimposed ramps of strata III, IV, and V disclosed the approaches to the city gates in use during these occupations. A three-chambered stratum VIII gate lies to the west of the later portals, while a section of the ramp of stratum XI encountered in a sounding trench indicates that the gate of this period lies still farther to the west.

Rās Siyāgha

(Custodia di Terra Santa)

THE chief results of the second expedition to Siyāgha in Trans-Jordan (15 July-22 October 1935) were published by the *Review of the Terra Santa College*, Vol. V (1935), pp. 6-13; and the French, Italian, and Spanish editions of *La Terre Sainte* for December 1935, and January 1936. The readers are referred to the above reports for details regarding the small trefoil church, the monastic buildings, masonry tombs, caves, and other objects found during this campaign. The results seem to fit perfectly into the chronological framework supplied by the Targum of Onkelos, Sylvia, Peter the Iberian, and the date of the inscription in the Baptistry. The oldest architectural remains on the site seem to be represented by the trefoil building, which exists beneath the presbytery of the basilica (excavated in 1933). This structure exhibits features which can be best interpreted if we assume a date at the end of the second or the beginning of the third century of our era. In this case it is tempting to associate it with 'the house of the burial of Moses' in the Targum of Onkelos on Num. xxxii. 3. This same building meets all the requirements of Sylvia's description of her visit to 'the small church' dedicated to Moses on Mt. Nebo (end of the fourth century). In the fifth century this small church seems to have been incorporated into the 'large church' visited by Peter the Iberian. On this occasion or later, the lateral apses gave way to two quadrilateral sacristies opening directly on to the large sanctuary, whose mosaic pavement was repaired at least twice. Soundings made in the nave of the church in 1935 revealed the fact that this part of the building had seen a long period of use; two mosaic pavements had been worn out completely; only the bed and small sections of the mosaics were preserved near the columns. Near the main entrance a coating of mortar served as the pavement in the final period of use. The two southern chapels, whose walls do not bond into the southern wall of the church, have mosaic pavements finished at the end of the sixth (597) and beginning of the seventh centuries of our era. Here there is little evidence of wear; the repairs which were made were necessary on account of the intentional destruction of all

animal designs. Turning to the rooms at the ends of the narthex and around the atrium (21 in all), we find that many of the walls and pilasters are standing on older mosaic pavements enclosing the pilaster bases of differently arranged rooms. On the north slope two terraces were built: the upper supported a paved court and street, the lower a row of cells below the level of the courtyard and street. In a catastrophe which overtook Siyāgha the cells at the eastern end of the lower terrace were buried permanently beneath the huge boulders of the trefoil building. At the entrance of the lower terrace the rooms were filled in and built over at a later period. The contents of the room (coins, pottery, lamps, &c.), when carefully correlated, should give us some very definite and interesting results. This brief survey of the results of the excavations carried out at Siyāgha seems to point to a long uninterrupted occupation of the site, beginning in the middle of the Roman period and extending well into the early Arab period. During the course of so many centuries it became necessary to repair, remodel, and enlarge or add to the buildings; the excavated ruins give evidence of all these processes, which enable us to trace the history of this site.

es Samū'

(Hebrew University, Jerusalem, directed by Prof. L. A. Mayer and Dr. A. Reifenberg)

IN the winter months 1936 Prof. L. A. Mayer and Dr. A. Reifenberg carried out excavations in *es Samū'* to the South of Yaṭṭa, in the Hebron District, usually identified with the Biblical Eshtemoa (Joshua 15⁵⁰, I Sam. 30²⁸, and elsewhere). Little is known about the history of this site during the post-Biblical period, except that there was a Jewish settlement there (Eusebius, *Onomasticon*, ed. Klostermann, 26, 11; 86, 20; Mann, *Texts and Studies*, I, p. 618), a fact corroborated by numerous finds of pieces of sculpture showing candlesticks and other Jewish symbols. The existence of a synagogue on this site was assumed by several archaeologists, but it could not be identified until the excavators discovered the thora-shrine and a relevant inscription.

In parts the synagogue is remarkably well preserved, the top storey of the western wall being almost intact, and that of the northern wall to a considerable extent, which helps us to understand the original design better. On the other hand, believers in a local legend, still current among the villagers, that there is a treasure buried in the synagogue, destroyed the floor completely. The columns, too, have disappeared almost entirely, and nothing is left of the roof but a few fragments of tiles.

Two periods of building can be clearly discerned, the older one, which is

Roman, and a later one, early Byzantine. The building, roughly 18×23 ms., is wider than it is long, and at the time of the discovery was the first synagogal broadhouse met with in Palestine, a type hitherto represented only by the synagogue in Dura-Europos. Meanwhile, however, the excavators have found two additional broadhouse-synagogues, one in Khirbet Sūsiyye near Esh-temoa, and another in Nāwa in the Ḥaurān (cf. *Bulletin of the Jewish Palestine Exploration Society*, IV, pp. 1 ff.).

As was to be expected, the wall with the thora-shrine faces north, i.e. Jerusalem. The thora-shrine in the Roman part of the synagogue was flanked by two smaller niches on either side, and placed 2.08 ms. above floor-level. We may justifiably assume that as a rule thora-shrines in the Roman synagogues in Palestine were built high up in the wall, a fact which did not emerge from the plans as the upper storey was nowhere preserved. Consequently the oldest Galilean synagogues without thora-shrines (as in Capernaum, Khorazin, etc.) should be reconstructed on the model of Eshtemoa. Some time later, in the Byzantine period, a second niche was constructed, placed two steps above the ground level, similar to those commonly met with in Palestine. The excavation was still not quite finished when further work had to be postponed.

esh Sheikh Ibreik

(Jewish Palestine Exploration Society; directed by Dr. B. Maisler)

THE first season of excavations lasted from October to January, 1937. The excavators cleared the northernmost of the four large tomb-systems in the western slope of the mound. It has been ascertained that the tombs formed a catacomb of several storeys. A staircase led from the entrance to a corridor 30 m. long, from which access was obtained to various halls; the actual tomb-rooms were entered from these. So far 16 halls, each with 2-9 subordinate rooms, have been found. Most of the doorways of the halls are still extant, with their doors and lintels *in situ*; the doors and lintels are covered with decorations and inscriptions. The graves in the rooms are of various types, including arcosolia, shafts, and loculi. The majority of the burials were originally in wooden coffins, of which remains were found in the graves, together with pottery and glass ware, including decorated pottery lamps.

A large number of graffiti, paintings, and reliefs were found on the walls and ceilings of the tombs; some of the slabs covering the graves were also decorated. The decorations show drawings of angels, human beings, such as riders, also animals and plants, boats, ships, and various geometric designs. The seven-branched candlestick appears frequently, in different forms, as well as other

Jewish *motifs*, such as the synagogue portals, the thora-shrine, oil jars, the *ethrog* and the *lulab* &c. Numerous carved capitals were also found.

The number of inscriptions found amounts so far to 130; most of them were in Greek, but many in Hebrew and some in Palmyrene script were also discovered. Some of the inscriptions are bi-lingual. The majority of the names are Biblical, but some Greek, Latin, and Aramaic names were also included; titles like 'rabbi' and 'elder' are added to some names. The inscriptions include also two marble tablets, one in Greek, the other in Hebrew. From the epigraphical material it appears that one room was reserved for the members of a large family of rabbis, and another for priests; further it seems that the dead were brought to this necropolis from other sites in Palestine and abroad, including even Palmyra and perhaps Southern Arabia.

The excavators date the tombs to the second to fourth centuries A.D.; the necropolis was apparently in use during the whole of that period. They also propose to identify the site of Sheikh Ibrik with the ancient Bēt Shē'ārīm or Besara, one of the seats of the Sanhedrin and the burial place of the patriarch Judah I (135-220 A.D.).

The second season at esh Sheikh Ibrik began in April 1937.

Tell ed Duweir

(Wellcome Archaeological Research Expedition to the Near East, directed by J. L. Starkey)

DURING the fourth season at Tell ed Duweir, the saddle area adjoining the camp house was finally cleared and the space is now available as a dumping-ground.

The debris from the middle temple level, below the north-west corner of the mound, was sieved, and among the objects found was a haematite cylinder seal of Syrian workmanship, engraved with the figures of deities and their symbols, and several gold pendants, one embossed with the face of a bearded man. It was then possible to expose the plan of an earlier temple below, which presented a different arrangement to the upper ones. The sanctuary is much smaller, and only two pillars were needed to support the roof. To the west was a single small chapel or chamber, founded on the counter scarp of the Hyksos fosse. The altar, immediately below the later ones, was a low bench with three projections, and against it was an interesting group of pottery, including a flat platter and a fine imported vase, Late Helladic II, 1450-1400 B.C. A peculiarity was the scarcity of small, deep, offering bowls in this level; instead there were over fifty dipper flasks, which may have served the same purpose, and quantities of knuckle-bones. Among the smaller

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objects was a bronze statuette of Reshef, wearing a kilt and conical cap; gold star pendants and buttons, and lazuli beads.

As things stand, the dates may be as follows:

Lowest temple	.	.	.	c. 1480 to 1420 B.C.
Middle	„	.	.	c. 1420 to 1335 B.C.
Middle	„	disused	.	c. 1335 to 1325 B.C.
Upper	„	.	.	c. 1325 to 1260 B.C., when it was destroyed by fire.

A further L.B. I tomb group in area 100 has added to our series of pottery forms. One XVIIIth-dynasty tomb chamber had been used as a dwelling in Solomonic times, and re-used about two centuries later for a deposit of some two thousand bodies. Five hundred and fifty skulls were sufficiently intact for preservation, these have been waxed and removed for study. Besides pathological specimens, cases of injury, and some deliberately deformed skulls, there are two examples of square trepanning—a method which was known to the Incas.

Excavations within the city walls have shown that below the Persian level the 'Zedekiah' city was destroyed by fire; by the mass of storage jars, some bearing the royal seal of Hebron, and the abundance of domestic pottery forms, this destruction can be dated to about 600 B.C. (Nebuchadnezzar's attack, 588-586 B.C.). It is now clear that Lachish was burnt twice within a short time, but it is the last burning that destroyed the buildings cleared this season, as well as the 'guardroom' within the outer city gate, where the Lachish letters were found last year.

So far an area 40 × 20 m. has been cleared between the south-west corner of the Palace-Fort and the city gate; the space just within was an open square, but on approaching the Palace-Fort, chambers appeared which were probably shops. Dyeing vats and loom weights show that textile industries were carried on, and saddle querns suggest a corn Chandler's establishment. More clay-seal impressions were found, with the marks of papyrus and the binding string on the back; one read: 'For Hilkiyah the son of Maas', and the other was a decorative scarab design.

A horseshoe shaped depression on the south-east corner of the city was partly investigated. It proved to contain a pit, cut in the limestone, probably connected with the defences. The head of the shaft is a glacis, sloping steeply down to the edge of a rectangular pit. Tests have shown that it descends vertically and measures 21.50 × 25.70 m., and is the largest engineering work so far found in Palestine.

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Tell el Jerishe

(Hebrew University, Jerusalem; directed by Dr. E. L. Sukenik with the co-operation of Mr. S. Yeivin)

THE excavations were carried on from April to the end of June, 1936, on both the northern and the southern slopes of the tell.

On the slope of the tell a glacis was found, composed of alternate layers of crushed sandstone and beaten earth; this mass reposed on a foundation of big bricks resting directly on the rock. At the foot of the slope were the remains of a stone wall, which served apparently as the retaining wall of the glacis, and at the top of the slope were the remains of the brick wall which crowned the glacis. Pottery found in the layers of beaten earth show that the glacis was constructed about the middle of the Middle Bronze Age.

Excavations in the southern slope of the tell proved again what had been already ascertained in the previous season, viz. that the so-called 'Philistine' pottery appears with objects of Late Bronze II.

Tuleilāt Ghassūl

(Pontifical Biblical Institute of Jerusalem; directed by the Rev. P. Robert Koeppel, S.J.)

AFTER a lapse of over a year, due to the sad loss of the Rev. P. Alexis Mallon, S.J., the Pontifical Biblical Institute commenced its seventh campaign at Tuleilāt Ghassūl in February under the directorship of the Rev. P. Robert Koeppel, S.J.

The sector chosen for this year's work lay alongside of and adjacent to the north side of Tell 3 in the squares A 5 to A 9, and in B 5 to B 9, the latter squares forming the link with the old excavation.

The campaign had for its chief aim the stratigraphy of the top level, i.e. IV B and IV A. (This is one occupational level, but divisible into an older and a younger phase.) To ensure accuracy, the excavators proceeded downward by 20 cm. stages, a process which helped immeasurably in determining the different strata. After a careful study of the evidence, it was clear that this uppermost habitation did not last for several centuries, as had been previously supposed.

The ceramic finds, with few exceptions, followed the general types found in previous campaigns, although painted sherds were rather abundant. Geometric simplicity marked these painted sherds, red-painted bands predominating. Amongst the other decorative types, the bands with finger impressions and the well-known crescent-shaped incisions were quite common. Real ledge-handles were not found, although a knob-ledge type appeared frequently. The horn-shaped vessels (*cornets*), so characteristic of Ghassūl, were uncovered in abundance (although in a fragmentary state) in one important room, which we shall treat of later.

One particular exception was a biconical-shaped vase, having two sets of double ear-handles, four small decorative lug-handles, and traces of red-painted bands. Another noteworthy exception was a small bowl, also possessing two sets of double ear-handles, a band of chevrons on the rim, and a small spout-aperture located in the middle of the bowl.

Flints likewise remained true to form, especially the characteristic fan-scrapers. The preponderance of chisels and the absence of arrow-heads is in sharp contrast to the flints of Jericho's 'Chalcolithic' level, where only one chisel was discovered, while arrow-heads appeared rather frequently.

Traces of wall-painting were discovered in seven places, but only four could be saved. Of these one has been examined, but owing to its fragile and jumbled state, nothing satisfactory was revealed.

We have already referred to the presence of many pottery 'horn' fragments in one particular room. Besides these, numerous painted sherds, delicately executed, were uncovered, and in one corner, six animal horns. The room itself with its unusually square walls, although comparatively small, must have been well decorated, as traces of paintings were found in the fallen walls. Outside this inner room and on a lower level, was a small antechamber with two square pillars, like the portals of a sanctuary. Adjacent to this was another compartment whose southern wall showed the distinct lines of four square pillars. Beyond and another step lower was a long room, where the bird-painting was found in a previous campaign. White plaster lined the walls of this room, and traces of painting were evident on its surface. Add to this evidence the fact that this spot is located in the centre of the tell at one of the highest points, and one may assert with some probability that here was a sanctuary, or at least some house of worship. Further investigation in November will, it is hoped, yield a definite decision regarding this.

Regarding the age of our upper level the excavators found that the ledge-handles, upon which so much theory has rested, cannot, owing to their absence, be taken as a norm, while burnished and polished ware are also non-existent in this upper level. The presence of certain types of painted sherds, notably those with spouts, snake *motifs*, and the resemblance of some forms would seem to point to the E.B. I age. On the other hand, the primitive form and finish of the Ghassūlian ware plus the light gritty texture in many sherds marks it out as Chalcolithic. Sufficiently definite analogies with sites known to be Chalcolithic cannot be discovered, with the one possible exception of pre-historic Fāri'a. In the absence, therefore, of definite clues and the lack of well defined norms, the excavators feel, as a conservative estimate, that levels IV_B and IV_A at Ghassūl may represent a stage from the Chalcolithic age to E.B. I.

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¹ Continued from Vol. V, pp. 211-12.

² See also 'Rās el Kharrūbe', below.

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